

GSIA

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Gloucestershire Society for Industrial Archaeology

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In view of the current interest in the restoration of the Cotswold Canals this year's cover illustration shows the obverse of a halfpenny trade token issued by the Thames & Severn Canal Company in 1795.
(Token courtesy of Moira Wilson)

EDITORIAL

This year sees a new editor for the Annual Journal, and only the fifth since the present format was adopted in 1971. The editor then was M. J. Savory who was succeeded the following year by Miss Amina Chatwin, who is of course, currently, our President. In 1981 Amina was succeeded by the late Dr Christopher Cox who has also served GSIA well and sadly this issue contains his obituary. The last fifteen issues have been produced under the careful eye of Miss Amber Patrick and it is appropriate to record here the Society's gratitude to Amber for undertaking this very important and by no means easy role for so long. It has to be said that it is most unlikely that the new editor's term of office will span fifteen years as he considers it to be a very temporary measure until a more suitably qualified member can be found to take on the job for the next few issues!

The last year has been a busy time for GSIA, as usual, and it is good to report that a start has been made on a new edition of the Society's gazetteer of the Industrial Archaeology of Gloucestershire. The proposals for the restoration of the Stroudwater Navigation and the Thames and Severn Canals took up considerable amounts of time over the year. In addition GSIA has participated in the preparation of plans for the future management of Leckhampton Hill and also took the opportunity to make an extensive photographic record of the demolition of the former Lister factory at Dursley. The firm, which has roots in Dursley dating back to 1867, became a world leader in the production of small diesel engines in the latter part of the 20th century. However, increasing foreign competition has taken its toll and the former factory site has been sold for housing and business use.

Three of these projects are covered in the present issue. Following on from his article last year, Theo Stening has provided an update on the proposals for the restoration of the canals. This series of articles will form a valuable record when historians come to examine how the restoration was carried out. Ray Wilson has provided reports on both the Society's proposals for the management of the industrial archaeology of Leckhampton Hill and the record of the former Lister factory.

The articles in this year's Journal are an interesting and varied mix as ever. David O'Connor has provided a summary of his extensive researches into the history of Battledown Brickworks at Cheltenham. Stephen Mills has been following the fortunes of the Hicks family which had such an important influence on the parish of Eastington and the surrounding district.

The retiring editor, Amber Patrick, has provided an account of the fascinating former brewery and malthouse complex in the small village of Brockhampton near Andoversford. Tony Youles has been out and about in the Forest of Dean and continues his reports on the present remains of the tramroads in the district. An interesting, but little known building at 57-59 Winchcombe Street Cheltenham is the subject of an article by Klara Sudbury. This was once occupied by a firm of corn merchants but in the best tradition of the reuse of industrial buildings it has been an Arts Centre in recent years. David Hardwick has written about the Long Family which had extensive interests in the Wotton-under-Edge and surrounding district. There are also the usual reports of GSIA summer visits and book reviews.

More than 30 GSIA Journals have now been published and without doubt the articles they contain form a most valuable account of Gloucestershire's industrial past. However, there are some topics which have hardly been considered in that time. One topic which comes to mind with the demolition of the last of the hangers on the Gloster Aircraft Company site at

Brockworth in June 2002 is the aviation industry. There are others, hence this call for suggestions or better still actual contributions. These can be short (say two pages) or much more extensive. Please send your ideas to the Honorary Secretary.

Finally, it is a pleasure to thank all of this year's contributors and Sylvia Black, Amber Patrick and Hugh Conway-Jones for their invaluable help with the production of the Journal.

Ray Wilson

OBITUARY

Dr Christopher Cox 1914 - 2002

Christopher Cox who died on 22 January 2002 was a very early member of the Society and for several years was a member of the Committee and a past Editor of the Annual Journal. We were delighted that he was our guest speaker at the Society's Annual Dinner in 1989 when we celebrated the 25th anniversary of the Society.

Christopher was born at Stroud and educated at The Crypt School, Gloucester and Pembroke College, Oxford. He had a brief spell as a journalist with the Daily Mail before the Second World War and during the war he served in the Ambulance Service and then with the Intelligence Service in the Far East. When he returned after the war he decided to train as a teacher and then taught at various schools in London including Holland Park School soon after it opened as one of London's first comprehensive schools.

Soon after his retirement he and his wife 'Blue' moved to Bristol where he was able to devote time to the industrial history and archaeology of his native Gloucestershire. A particular interest of Christopher's was the history of the turnpike roads and their surviving monuments in the form of milestones and tollhouses. In 1964 and 1967 he published articles in the Transactions of the Bristol and Gloucestershire Archaeological Society (TBGAS) on milestones and turnpike houses of the Stroud district, respectively. This was before the days of our own Journal which he later edited between 1981 until 1987. Over the years he led a number of field visits for the Society with his characteristic enthusiasm. These were usually concerned with turnpikes, tollhouses and milestones. However, parish stones were another of his great interests and they were the subject of a number of publications by him. In addition, as recently as 1992 his paper *on The Woodlands of Woodchester-the Charters Reconsidered* was published in the TBGAS.

His turnpike studies were particularly concentrated on the Nailsworth area and in the 1960s he researched the complex history of the Nailsworth Turnpike Trust with a view to writing it up for a Ph.D. with the London School of Economics (LSE). The project was registered with the University but teaching commitments and his family meant he could not immediately devote the time needed to complete his thesis. However, when he retired he took up the study again and in 1986 at the age of 72 he was awarded his Ph.D. by the LSE nearly 30 years after he started. His thesis runs to more than 400 pages but it is to be hoped that the GSIA might consider publishing it electronically - such is its value to local historians. This would be a fitting tribute to someone who has contributed so much to Industrial Archaeology in Gloucestershire.

Ray Wilson

GSIA SUMMER VISITS 2002

The Society's thanks are due to Frank Colls who organised a full programme of local visits and two excursions further afield by coach. The following reports have been compiled by Frank Colls with a contribution from Ray Wilson.

Sunday 14th April 2002

Afternoon walk in the Cirencester and Siddington area

About 30 members and guests joined this walk led by committee member Alan Strickland and his wife Sue. The walk took in a section of the Thames and Severn Canal, which was completed in 1789 and finally abandoned in 1933. We also covered parts of the Midland and South Western Junction Railway which linked Cheltenham with Southampton, this section being opened in 1883 with closure in 1963.

We started in Love Lane in the modern industrial area of Cirencester and heard that some of the anonymous looking buildings housed very high-tech enterprises, such as manufacturing replacement hip joints. We soon came to the site of the first of the Siddington Locks. The upper lock and agent's house could be seen above the skew bridge over the canal. The bridge coping stones were seen to be linked with iron straps, many being marked TSC. Continuing along the towpath past the now cleared 2nd and 3rd locks, and then past a remaining brick pier of a removed MSWJ railway bridge, we came to the site of the Siddington lower lock. This now has a house built over the actual location, a challenge for any restoration group!

We kept to the towpath, passing the repaired Cowbridge hump back bridge and past the site of the aqueduct over the river Churn, to the site of the South Cerney upper lock. Completely filled in, the top level of lock masonry is clearly in position forming a striking garden feature of the adjacent house which was formerly a lock cottage. We heard about the 17th century practice of flooding of the water meadows in this section and the special ducts built under the canal to allow this. We also heard about an adjacent brick works and wharf and the buried locks in the field further on.

Leaving the towpath we crossed the Claymeadow Interpretation Centre with its small abandoned farm, trapped between the railway and the canal. We passed the site of a worker's cottage and the nearby willow plantation (for cricket bats) before we picked up the course of the railway and headed northwards back to Siddington. Here, we saw the 16th century Roberts House and its Quaker burial ground and heard about John Roberts who built the Friends Meeting House in Cirencester. To the east, and in view for much of the walk, was the Siddington folly tower which was formerly a wind driven grist mill but had been altered and is now a derelict but prominent landmark.

We then visited the 12th century Siddington tithe barn, an impressive five-bay aisled structure now in use as part of a horse riding centre. We continued across some field paths and followed a short and very overgrown section of the former Cirencester canal arm (not destined for restoration by the Cotswold Canals Trust) to return to our starting point. Before dispersing we thanked Alan and Sue for a most interesting and varied walk.

Tuesday 21st May 2002
Visit to Tytherington Quarry

We were grateful to Julian Smallshaw, quarry manager, for the chance to visit during the company's working hours. Tytherington is operated by Hanson Aggregates and produces a range of stone products for road building and construction purposes. Fourteen members attended and we had a brief introductory talk before being supplied with hard hats and reflective waistcoats for a tour of the extensive site. This covers three separate quarries Northface, Grovesend (where the main production plant is located) and Woodlease. There are two interconnecting tunnels beneath the road and railway line which cross the site.

We began by looking down on the Woodlease quarry and heard about the geological structure which includes strata of sandstone, mudstone, calcareous limestone with some pink dolomite, oolite and shales. The main output is carboniferous limestone and annual production is about one million tonnes. The method of working involves blasting an area of the face and using bucket loaders to fill huge dumper trucks for taking the rock to the primary crushing plant. We walked through the large tunnel into Woodlease quarry to see the rock from a recently blasted area being taken out. The grand scale and depth of the quarries was very impressive. We returned past the point where the dumper trucks discharge the rock into the hoppers for primary crushing and heard about the conveyor systems and grading plant. Rock of various sizes from 2mm up to 48mm is produced. Stone from other quarries is sometimes brought in to make up particular "recipes" for special purposes. Many road construction projects need the rock to be coated in bitumen and we saw a Stothert and Pitt plant for this built in 1962 as well as an asphalt plant from 1985. Much of the coated rock for road building is handled in large heated containers known as Macadam Amenity Centres, or MAC boxes, these being attached to tractor units for taking to construction sites. While some lorry transport is used, a rail connection enables 4 trains a day to be employed taking rock products to the company's Battersea depot.

The most northerly quarry, Northface, has now been sold but the company will extract good stone from the lowest level before handing it over. The quarry may be used as a landfill site for inert waste but there are still outstanding questions on the economics of this proposal. We returned to the offices for a welcome cup of tea and a final round of questions before thanking Mr Smallshaw and his colleagues for a most interesting afternoon. While many members had seen quarries in operation, the huge scale of Tytherington made this a very memorable visit.

Sunday 26th May 2002
Coach trip to Wigan

About 35 members and guests travelled northwards for this two stage visit. The main part of the day was spent at the Wigan Pier Experience, a museum development based alongside the Leeds and Liverpool Canal. Warehouses and mill buildings now house a wide range of displays and exhibits covering the social and industrial history of the area, coal and cotton being pre-eminent. The "Way We Were" areas depicted working, social and domestic life and we dutifully attended the Victorian Schoolroom for a short lesson in local industry and proper behaviour from a stern school mistress. One or two members came close to being reprimanded before we were let out! The famous Wigan Pier had no doubt prompted the display of items reminiscent of holiday times for working people, the Wakes Weeks, a topic not often portrayed in industrial museums. The wet weather prevented a full exploration of the outdoor areas of the canal, but there was plenty more to see undercover. The Trencherfield cotton spinning mill was especially interesting with its huge 2100 hp engine built by Woods

of Bolton in 1908. Unfortunately, some recently discovered defects meant that the engine could not be steamed but it was still very impressive. Many other engines, textile machinery and auxiliary plant were on display. Nearby was an area set up as Opie's Museum of Memories, a look at each decade of the twentieth century covering a wide range of artefacts, products, packaging, equipment and publications. This formed a fascinating and comprehensive review of changing tastes and styles stimulated by rapid technological development throughout the century.

For the second part of the day we travelled to Astley Green Colliery near Leigh. Opened in 1912 but closed in 1970, this reminder of the once extensive South Lancashire coal industry is now being cared for by the Red Rose Steam Society. Mike Shardlow and his colleagues told us about the working life of the pit and the efforts to preserve and maintain it. They have a small museum of equipment and photographs and they are especially proud of the steam winding engine which they hope to restore to a state where its operation can be demonstrated. The 3300 hp Yates and Thom winding engine was one of the largest steam winders used in Britain. Alongside are items of associated plant which bring home the massive scale of the winding process. The adjoining pithead gear was equally impressive, a 98 feet lattice steel tower, but the rain deterred us from spending too long outside. It was soon time to thank our hosts and head for home.

Sunday 16th June 2002

Afternoon walk along parts of the Leominster Canal

We were grateful to Martin Hudson and Gerry Calderbank for leading 15 of us on a walk along a stretch of this little known canal. Intended in the authorising Act of 1791 to link Kington in West Herefordshire with the River Severn, it was only built between the Mamble coal fields and Leominster. The complicated story of the many problems in its planning, construction and operation, its eventual decline, and of the renewed interest in it from local historians was to be the subject of a future GSIA talk (given by Martin Hudson on 6th February 2003).

Not a lot remains of the canal structures but the line can be followed and we began near the east end of the canal (as finally built) just east of Newnham. Tramways would have brought coal to the Marlbrook wharf when the route to Leominster was completed in 1796. Wharf House (now a fine private residence) was an administrative centre for the company and nearby were forges and other buildings. We continued along the "towpath" to the site of a lock with an adjacent lock house. Water supply was a continuing problem and we passed a culvert which was built to ensure the canal company didn't take river water which was needed as a power source by other enterprises. Further lock sites were passed before we met the major remaining feature, the 1793 Rea Aqueduct. This has a 45 feet span over the River Rea and a timber beam within the brickwork was pointed out as an original part of the structure. Three lateral iron tie rods had been added by 1795 but there was concern even then that it was unsound. It looks very dilapidated but, defiantly, it still stands. We continued close to the indistinct line of the canal to Oxnall Tunnel, now almost fully buried by later activity. The intention had been to make a cutting through the high terrain but earth falls were too severe since the ground was actually glacial moraine. In the end a brick lined tunnel was constructed and just the top of the west portal arch was still visible at ground level. We heard, finally, about the onset of railway developments which caused traffic on the canal to decline, with final closure in 1859. We had covered an interesting few miles of the canal and were soon back at Newnham Bridge where we thanked our guides for a most interesting walk.

Tuesday 2nd July 2002
Social evening, Berkeley

We were grateful to the Berkeley Local History Society for laying on guides to show us around this interesting small town. Undeterred by the wet weather, over 20 members and guests were given a good insight into the way the town had developed. While Berkeley Castle once dominated the area and was the source of the town's early development, it grew mainly to serve the needs of farmers, traders and travellers. As we walked around the main streets, we heard about the former uses of many of the buildings which covered the typical range of a fairly self-sufficient community. A variety of shops, town hall, bank, post office, schools, churches, hospital, police station, and of course, several inns were pointed out. There was a sprinkling of small industry and the nearby Berkeley Pill brought boats up from the Severn to supply coal and take out local produce. While many of the buildings were now used for completely different purposes, we could appreciate the fine and varied architecture and reflect on the changing face of rural life.

The former home of Edward Jenner was seen and those of us who hadn't visited the museum about his life and work, and the discovery of smallpox vaccination, reminded ourselves that we must make a return visit for this very soon. We finished at St Mary's Church with its separate tower, and were treated to a short talk from Peter Yardley who has made a special study of the history of the church and its many fascinating features.

We had had a very informative tour around the town and we thanked our guides for their efforts. Most members were pleased to adjourn to the Malt House pub for some welcome and convivial refreshment.

Sunday 18th August 2002
Afternoon walk, Stonehouse and Nailsworth Railway

About 30 Members and friends gathered at South Woodchester on a warm afternoon for the second stage of the exploration of the line of the former Stonehouse to Nailsworth Railway. The line had closed to passengers in 1947 and then goods in 1966 and so relatively few railway features remain. However, there was plenty just off the track for the leader Ray Wilson to show the party, and once the arrangements for the 'car shuttle' had been made we set off in the direction of Stroud.

The line is now a cycle trail, and some years ago several sculptures were erected along its length. Very soon one of the surviving ones was encountered. This took the delightful form of an old-style porter's hand truck complete with trunk, suitcase and hatbox, all made out of wood. After passing the rear of various modern industrial buildings on the site of the former Workman's Saw Mills, the site of Woodchester Station was reached. Today, only the attractive brick-built crossing keeper's house survives. A short detour was made up the hill to see Churches Mill which was formerly a cloth mill but in recent times had been used for the manufacture of walking sticks. In the late 1990s it was converted into flats and some new dwellings were built on the site. We continued up the hill to the War Memorial where the name G Archer-Shee was pointed out. This name did not mean much to the party until it was explained that George Archer-Shee was "The Winslow Boy" in the famous play of that name by Terrence Rattigan.

Back on the line of the railway we passed the site of Arthur's Press, the former printing firm, and crossed the old bridge which carried the line over the stream coming from Southfield

Mill. At the bridge carrying the road up to North Woodchester we discovered another wooden sculpture. It had become very overgrown and somewhat decayed but it clearly represented the black and white notes of a piano keyboard. Clearly, it relates to the nearby Woodchester Mill where pianos have been manufactured for nearly a century. At Rooksmoor Mill we saw the massive masonry wall built into the bank of the Nailsworth Stream to support the siding here. It was possible to leave the track and follow the public footpath along the southern end of the mill building to see the positions of the former waterwheels and the bypass sluices. A little further on the elevated position of the track allowed us to look down on the surviving mill house at Friggs Mill. This former corn mill was at one time known as Cotswold Mills.

Soon we had reached the extensive stone buildings of Lightpill Mill where Erinoid manufactured casein plastic for much of the twentieth century. The next stop was Dudbridge Junction. Sadly little of the station had survived into the 1990s and even part of that was destroyed when the roundabout was constructed to serve the new J. Sainsbury supermarket in 1996. However it is still possible to make out the coping stones of the platform edges. A diversion was made to Kimmins Mill, the 1849 corn mill that lies in Sainsbury's car park, where the curator John Keenan and one of our members Brian Ward Ellison showed us the remarkable archive of the construction industry that is now housed there.

A millennium project milepost sponsored by the Royal Bank of Scotland pointed the direction of the one mile 'twig' of the branch line to Stroud opened in 1886. We passed under the fine 'skew' bridge at Rodborough Hill which is almost a short tunnel. The site of Stroud gas works siding and the concrete base of the associated coal tip were clearly visible. A narrow gauge railway below the tip took the coal to the storage area at the gas works. At Walbridge, Stroud, the remains of the old viaduct was inspected along with the site of Wallbridge Mill where Howard and Powell manufactured cloth until the 1960s. From the old station approach road alongside the Bell Hotel, the site of Stroud Midland Station was pointed out in the middle of the present day builders' merchant. It was noted that this was a wooden structure opened in 1886 as a temporary measure which remained until it was demolished in about 1986, a hundred years later! The party thanked the leader for a very varied and interesting afternoon and looked forward to the third instalment next year.

R.W.

Monday 2nd September 2002

Factory visit, Aeroengine Bearings UK Ltd

Our usual practice of including a visit to a modern manufacturing enterprise took us this year to the Aeroengine Bearings UK factory at Oldends Lane, Stonehouse. This has been a bearing factory for a number of years and it was formerly NSK Aerospace Europe before being part acquired by SKF of Sweden. The early evening visit enabled us to see many aspects of the factory in operation although our numbers had to be limited to 10. We were grateful to Keith Robinson for showing us around and explaining the various processes involved. The factory produces very high precision components used in bearings for the main shafts and gearboxes for jet engines, with Rolls Royce as their main customer.

We began by seeing a display of components and bearings which ranged in diameter from a few millimetres up to about 50 centimetres, and some with very complex structures. The factory also does design work to meet the very specialised needs of aircraft engine manufacture. All components are highly specified in terms of materials and each set of parts

is rigorously tracked as it is moved around the various processes. Machining was a precision operation with computer assisted lathes and milling equipment. Inspection and dimension checking were key stages in these processes. We saw some of the plant used in heat treatment and chemical treatment to bring about the precise surface finishes required. Every component was subjected to tests for cracking or defects before being passed as acceptable. The final inspections for quality and dimensional accuracy were done in almost laboratory conditions with modern instrumentation. The final stages of cleaning and packaging were done in a conditioned environment to prevent any contamination of the components, and we could only see this area from outside.

We had had a fascinating couple of hours and everyone was impressed with the very high standard of engineering expertise and the level of precision and quality that was being achieved. Before departing, we thanked Mr Robinson for a most enjoyable and informative visit.

Sunday 15th September 2002

Coach trip to Bristol

The initial idea for the autumn coach trip was a visit to Wiltshire but this proved awkward to arrange. Although there had been previous visits to Bristol, the Heritage Weekend events laid on around the docks for the chosen weekend made it an attractive proposition and about 40 members and guests joined the trip.

Our route into Bristol from the M5 along the Portway gave us a chance to hear about general port developments along the river and later around Avonmouth. We passed under Brunel's famous suspension bridge and entered the extensive area of the Floating Harbour. Our first stop was the Underfall Yard where the Docks Engineer, Mr Pomeroy, and his colleagues showed us around. We heard about the system of controlling the harbour level and saw the sluice mechanisms in operation. Equipment was being operated in the maintenance workshops and it was good to see some of the older lathes and planing machines still giving good service, power coming from overhead belt drives. We saw the hydraulic pump house and the tall accumulator tower with its rising weight used to store power for the hydraulic systems used around the docks.

The next part of the visit was a trip around the harbour on the 1920 river steamer, The Tower Belle. We enjoyed a fascinating and informative commentary from the skipper as he pointed out the many historic waterside buildings and features. We covered a large area from the dock holding the SS Great Britain up to the start of the feeder canal near the former Totterdown Lock. With the events of the Heritage Weekend in full swing it was a busy scene along by the Industrial Museum, with many small vessels tied up, railway wagons moving along the dockside lines, the Fairbairn Steam Crane in operation, and some lively re-enactments of wharf activity taking place. As well as his history commentary, the skipper related some amusing stories about some of the bizarre aspects of modern waterside life and the many ships and smaller vessels around the harbour.

Members were then free to fit in lunch and then wander at will around the harbour. Many visited the Industrial Museum which had some extra displays and some interesting old films on show covering the working life of the docks. The Fairbairn Steam Crane and a climb up one of the dockside cranes were both popular attractions, and it was good to explore some of the features around the Bathurst basin.

We regrouped for a guided tour around the nooks and crannies of the Cumberland Basin and tried to get to grips with the layout and the lock and bridge formations. In 1809 Jessop built two entrance locks from the river (one at 45' and one at 33') and a single junction lock (at 45') into the main harbour. The curiosity of the Visits Organiser over these dimensions had been aroused by the story of the SS Great Britain (nominally 50' beam) getting stuck in one of the locks when she was taken out in 1844. This instigated a rather crude investigation of the supposedly 45' locks using a long tape measure (it also caused much amusement). The junction lock was reckoned to be 46' presumably allowing the Great Britain to squeeze through, but the entrance lock was reckoned to be 44' 8" thus causing the ship to become jammed. A later development by Brunel in 1848 widened the smaller southern entrance lock to 54'. Finally, in 1870, Howard built a new entrance lock and a new junction lock both at 62' width.

There was just time to see some of the other features of the Cumberland Basin, including some of the adjacent railway connections, before we joined our coach for a final tour around some other parts of Bristol of industrial and transport interest. These included the Temple Meads area, the bridges over the New Cut, the site of the Great Western Cotton Factory and some former Gas Works sites. We finally saw the point where the feeder canal for the floating harbour splits from the river Avon, just above the Netham Dam. This impressive vee shape dam controls the level of the floating harbour and was crucial to Jessop's scheme and to the successful development of the entire harbour complex.

Wednesday 2nd October 2002

Afternoon visit, National Monuments Record Centre, Swindon

The NMR, run by English Heritage, is an important repository of documents, drawings and photographs covering the country's architectural and archaeological heritage. For those interested in social and industrial history it is a valuable source of information on buildings and structures of all kinds. About 20 members took the opportunity to visit the centre, based in one of the former Great Western Railway offices and close to the Steam Museum (which some members had visited in the morning).

We began with a brief illustrated talk about the Centre and its role in not just storing the huge collection but in making documents and photographs accessible for research. We then had a guided tour of parts of the building, also of interest since it was here that much of the design work of the GWR was carried out. We saw the area outside the modern storage rooms, all maintained at controlled environmental conditions to ensure documents and photographs are properly preserved. These are accessed by intermediate holding chambers used for transferring items from the controlled conditions to the outside and subsequently for returning items back into storage. We visited the search rooms and reference library and heard about the ways in which we could make use of the centre for our own enquiries; anyone thinking of contributing to GSIA's efforts in some local research would find the NMR a very useful resource. Finally we had the chance to look through some folders of documents and photographs relating to Gloucestershire industry which the Centre staff had prepared for us. We all found many photographs of buildings or sites which we could identify and examine, a fascinating exercise. Before leaving we of course had time to thank Elaine Davis, the Gallery Officer, and her colleagues for a very interesting afternoon.

Sunday 20th October 2002
Afternoon walk, Darkhill Iron Works,

This site is fairly well known to GSIA members but on this walk we had the chance to look around in the company of Keith Webb who lives close by and who has recently published a book on the subject, *Robert Mushet and the Darkhill Ironworks* (Black Dwarf Publications, 2001). Only 8 members braved the very wet weather and the conditions were not conducive to a pleasant and leisurely guided tour, but we persevered.

With a good part of the industrial history of the Forest of Dean revolving around the production of iron, Darkhill is an important site. It is made more so because of developments which laid the foundations for modern steel alloys and Robert Forester Mushet was a key figure with his pioneering work. We walked around the site and saw the low level remains of many of the structures. Built in 1818 by David Mushet, Robert's father, the site has undergone many changes and the precise function of some sections is not entirely clear. Remains of hearths and furnaces, and of foundations of blowing engines and boilers have all been identified, and there was also a brick works on the site. Remains of crucibles and other implements have been found over the years which have helped to build up a picture of Mushet's experimental work which resulted in iron alloys with much greater wearing properties than previously. The full story of Mushet, and the way this related to the work of Henry Bessemer, is best appreciated by referring to Keith's book.

The weather had not improved as we went around the site and Keith's offer that we should return to his house for tea was quickly and gratefully accepted. Once in the dry we continued our discussions on the life and work of the Mushets, the importance of the Darkhill site and the later development of the Titanic Steelworks (1862) a short distance away. The name Titanic was derived from Robert Mushet's new process which used titanium in steel making. Keith spoke of the campaign which he and others were pursuing to get both the Darkhill and Titanic sites scheduled as Ancient Monuments. It was soon time to thank Keith and his wife for their hospitality and for a most interesting afternoon.

Postscript The scheduling of the two sites as Ancient Monuments was concluded on 4th November 2002.