

# GSIA

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## JOURNAL 2005

GLOUCESTERSHIRE SOCIETY FOR INDUSTRIAL ARCHAEOLOGY

# Gloucestershire Society for Industrial Archaeology

## Journal for 2005

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This year's cover illustration is by Nigel Cox and shows a reconstruction of 99-101 Westgate Street, Gloucester, a Tudor merchant's house (now the Folk Museum), as it might have appeared in about the 16<sup>th</sup> century (see Page 4).

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## EDITORIAL

We are again pleased to welcome several new contributors to the 2005 issue of the Journal which appropriately contains two articles relating to Isambard Kingdom Brunel. The great engineer was born on 9 April 1806 and the 200<sup>th</sup> anniversary of his birth has been marked nationally by a wave of new publications about him. Keith Hickman has written about a little known Gloucester connection with the launch of Brunel's steamship *The Great Eastern* in 1859. The second article relating to Brunel is an account by Hugh Conway-Jones of the railway yard and swing bridge over the River Severn at Llanthony, Gloucester. In about 1851, Brunel came up with a pioneering design for the railway bridge at Llanthony, the significance of which has not previously been properly recognised.

The Gloucester theme is continued by Nigel Cox, the Curator of Social History at the Gloucester Folk Museum, who has written about the role of that building in the mechanisation of the pin industry in the City. The manufacture of pins was a very important industry in the Gloucester area from the late 16<sup>th</sup> century until well into the 19<sup>th</sup> century. We learn here about the important developments in the mechanisation of the industry that took place in Gloucester in the early 19th century.

The food industry is often overlooked by industrial archaeologists and therefore the article by Ann Makemson of the Nailsworth Archives on Hillier's Bacon Factory at Newmarket, Nailsworth is very welcome. On the allied theme of drink, Amber Patrick has written on developments in the malting industry carried out by the Sleemans at Millend Mill, Eastington in the early 20<sup>th</sup> century. John Putley draws our attention to the surviving railway boundary markers in the County. He concludes with a plea that the remaining markers should be identified and recorded where possible before they are lost.

Theo Stening has provided what has become his annual update on the ambitious project to restore the Cotswold canals. The extent of the developments currently taking place means that there should be scope for such an article for some years to come. There was again a very successful programme of summer visits, both within the county and further afield. Our visits organiser (and Chairman) Frank Colls has as usual written a detailed account of each event.

This year's issue is perhaps unusual in that there are no articles relating to the Forest of Dean. In calling for articles for the next Journal we hope that this will be remedied. Please send offers of articles on any topic relating to the industrial archaeology of Gloucestershire to the Editor.

Our contributors must be congratulated and thanked for the very interesting articles they have provided this year. In addition, the Editor is grateful to Hugh Conway-Jones and Sylvia Black for their invaluable assistance with the production of this issue.

Ray Wilson February 2007

### **DAVID EWART BICK B.Sc., C Eng., M.I.Mech. E., F.S.A. 1929 – 2006**

There was a Humanist Memorial Service at the Hatherley Manor Hotel, Near Gloucester, on January 31st 2006 to celebrate the life of David Bick, who died on January 19th 2006.

There were groups of Walkers, groups of (had been) Racing Cyclists, groups of Vintage Car enthusiasts, Industrial Archaeologists, Mining Enthusiasts, and Engineers — there must have been almost two hundred and fifty people in the room, all brought together by their memories of someone that, on his own admission, and with the agreement of everyone present, had been the most awkward of men. I met friends from as far afield as South Wales and London, all gathered to remember an extraordinary man for whom they had a great respect and more than a little love. He was decisive, uncompromising, irascible and taciturn, yet he also had a strong vein of humour and endeared himself to us in many ways.

David's wife Sheila told how she had found a letter addressed "For my two sons, in the event of my decease". Thinking thankfully that this would be wishes for funeral arrangements, she found that, typically, it only contained exact instructions for starting up his several vintage motor vehicles.

David Bick was born in 1929. He went to Cheltenham Grammar School and spent four years at Leeds University, gaining a first class Honours degree in Mechanical Engineering. He spent his working life at Downty, where he was a brilliant stress engineer. He worked on Hydraulic Pit Props in the Mining Division. Later, on Hydraulically operated undercarriages for aircraft. He designed Booster Retarder equipment for moving railway trucks in Marshalling Yards, followed by Oleo systems; both of which were used in this country and on the mainland of Europe. He was more recently working on flexible drill heads for drilling curved holes under the North Sea.

In later years he moved to Dowty's Technical Development Section at Brockhampton. At Dowty Nucleonics he worked on the raising and lowering of nuclear control rods. He was awarded the Bramah Medal in 1980.

From an early age he was interested in Mining and founded the Welsh Mines Society in 1979. His son, Edward, said in his "appreciation" that until he went to school he thought everyone spent their holidays on old mining sites! He produced a steady stream of publications, beginning with The Gloucester and Cheltenham Railway in 1968, the history of the early horse-drawn tramway, and Old Leckhampton in 1971 which followed the history of a branch line to the quarries on Leckhampton Hill. Between 1975 and 1978 came a series of on mining; Dylife, and then The Old Metal Mines of Mid-Wales in five parts (these were later published in one hard-back edition).

There was also The Hereford and Gloucester Canal 1919, The Old Industries of Dean 1980, The Old Copper Mines of Snowdonia 1982 and 1985, Frongoch Lead and Zinc Mine 1986, Sygun Copper Mine 1987 and the Mines of Newent and Ross 1987. There was an enlarged hard-back edition of Old Leckhampton in 1994. In the same year he wrote, in collaboration with Philip Wyn Davies Lewis Morris and the Cardiganshire Mines, published by the National Library of Wales. David was an active member of GSIA from its early days and was our Chairman from 1972 to 1974. He was a committee member for many years and provided us some most interesting lectures and field visits to areas such the Coombe Hill Canal, Leckhampton Hill and Newent.

David's writing always grew out of his work in the field, and I remember many happy hours with him and friends on old mining sites.

Amina Chatwin.

## **GSIA VISIT REPORTS FOR 2005**

Once again 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 Penny Fernando who provided the report of the Somerset coach trip.

### **Wednesday 16<sup>th</sup> March 2005**

#### **Afternoon visit to Beta Marine Ltd of Woodchester**

Beta Marine Ltd is a small company putting together engine units for installation in many types of craft, from yachts to canal boats. A small GSIA group had the chance to visit their works, at Merretts Mill in South Woodchester, to see the various stages of assembly and testing. The basic diesel engines they use are from the Japanese company Kubota, who lead the world market in diesel engine production. A range of sizes from 10 to 90 bhp is used and the engines are transformed into complete power units ready for installation in boats by the company's dealers. It is known as "marinisation" and involves fitting each engine with cooling system, gearbox, electrical generator, control equipment and mounting frame to suit the intended installation. Most of this ancillary equipment is made in the UK. While many units are made to standard specifications, there are various options and accessories which make it possible for customers to fulfil their precise requirements. Much of their production is exported and there is a good demand in the USA. The company started 18 years ago with a number of ex-Lister people involved and it was good to see a local engineering concern with plenty of demand for its products. The visit was arranged through Andrew Growcoat and we were shown around by David Morris who explained the various assembly activities and told us about the company. Before leaving we thanked David for a most interesting afternoon.

### **Sunday 17<sup>th</sup> April 2005**

#### **Afternoon walk around Tewkesbury**

John Dixon was our guide for this look at some of the old industries and historical features of Tewkesbury. After leaving the Council Offices car park we saw the Hermitage toll house built when the turnpike road to Gloucester was made in the early 19<sup>th</sup> century. Opposite was an 18<sup>th</sup> century building which began as a workhouse, became a hospital and is now an up-market old people's home. Part of the workhouse garden had been used as a burial ground following severe cholera outbreaks in 1832 and 1849, and this is now part of the main cemetery. An octagonal cast iron pillar, made by James Savory, with a decorated stone pinnacle (perhaps re-used from the abbey) marks the cholera events.

Heading across the open high ground towards the Abbey we passed a memorial referring to the nearby Battle of Tewkesbury in 1471 and crossed the River Swilgate to see the Abbey School. This was once the home of Humphrey Brown who ran a silk mill in the 1850s, which we saw later in the walk. Turning up one of Tewkesbury's many alleys we came to Church Street with its many fine buildings, including the Royal Hop Pole, the town's main coaching inn. Down another of the intriguing alleys we came to the Oldbury area, home to many of the industrial sites. Tewkesbury had developed various manufacturing concerns typical of a market town in an agricultural area, such as water-powered milling, malting, boot and shoe

making, and stocking making. A reminder of the latter was a building which was part of a steam powered hosiery factory, now in residential use.

Industrial expansion had been limited due to the lack of a direct railway connection but a branch line from Ashchurch was opened in 1840. The terminal station was sited end-on to the High Street, but it had closed in 1864 when the branch line had been extended to Malvern and a second station had been built a little to the north-east. We saw the site of this as well as areas which had been goods yards and sidings. Although much is now overtaken with modern buildings, some features and boundary walls can be discerned. A nearby maltings had been occupied by Downtys in later years. At the site of the original station, all that remains is a vertical strip of stonework which had been the right hand wall of the main building. This is now sandwiched between an old shop and a recent brick built development, rather out of place and known locally as the Kremlin.

We crossed to Quay Street and heard about the short stretch of rail line which ran from the station, across the High Street and down to the Mill Avon, worked by gravity and by horse since locomotives were not permitted. We saw Healings Flour Mill, still in operation, although no longer supplied by riverboat, before walking alongside the Mill Avon and hearing about some of the industrial sites, including boatbuilding, on the opposite bank. Then came Abbey Mill on the site of a 12<sup>th</sup> century mill. Rebuilt many times and not worked since the early 20<sup>th</sup> century, it is now being converted for residential use. We also saw the new (c.1990) fish belly sluice structure for controlling the water flow. We finished our walk by taking the lane near to the river which was part of the original road to Gloucester before the turnpike road was built. We were soon back at our starting point where we thanked John for a varied and fascinating walk.

### **Sunday 15<sup>th</sup> May 2005**

#### **Coach trip to Combe Mill and the Fawley Hill Railway**

The Spring coach trip was in two parts, visiting the previous sawmill buildings of the Blenheim Estate at Combe and then the Fawley Hill Railway near Henley on Thames.

The Combe Mill Society have occasional steam days when they work their 1852 beam engine which originally powered the saw mill and other equipment. This had been supplied from a Cornish boiler of the same date until around 1912 before falling into disrepair. In 1972, after much voluntary restoration effort, the engine was successfully steamed with the Cornish boiler de-rated from 50 to 20psi. Sadly, a recent inspection showed excessive deterioration and a repair seems unlikely to be feasible. For the present, the Society has arranged a temporary steam supply from a traction engine but they are soon hoping to obtain a secondhand boiler so that the steam tradition can be upheld. The beam engine, which was made by Thomas Piggott Ltd of Birmingham, was installed to supplement the power from a water wheel and the restoration of this wheel (disused since the 1950s) is a future project for the Society. The visiting traction engine was in an adjacent yard and had been connected through temporary piping with a reducing valve (120 to 20psi). The engine, made by Marshall and Sons of Gainsborough in 1887, was named Eynsham Hall after the country estate a few miles away where it had been used to drive threshing machines and their sawmill (presumably by a belt drive). We were shown around by Society volunteers and also saw many other items, including smaller engines and pumps, a working blacksmiths shop, agricultural implements,

some impressive model engines, and a display of tower clocks, with the chance to hear from an enthusiast about their mechanisms.

It was then on to Fawley Hill to the 'garden' railway of Sir William McAlpine. A comprehensive museum adjoins the station buildings of the standard gauge line and the whole enterprise is run by volunteers of the Fawley Museum Society. Begun in 1965 as a hobby by William McAlpine, and expanded over many years, it is now a unique collection which is only open to railway and historical societies on a few days each year. Buildings and structures from various corners of Britain have been carefully re-erected to form a fascinating display viewed from the open wagons on the steam hauled service which takes visitors around the layout. The station, rebuilt from parts of Somersham station in Cambridgeshire, is at the top of the hill and the route descends to a small halt and along a little valley. The train then returns to the top, and the sight of the locomotive steaming up the final incline was quite awesome. No report can convey the wide range of items along the route through the parkland scenery and the ride itself was a great experience, especially in the fine weather we had. The Hudswell Clarke locomotive which ran throughout the day on the many trips down the hill and back, was originally made in 1913 and did long service on some of the major McAlpine building contracts including Wembley Stadium and the Llanwern Steelworks. After the excitements of the train ride (with some having two trips, and a few getting a footplate ride) there was still plenty to see around the station buildings. Further surprises awaited us as we explored the museum, a huge collection of artefacts, pictures, displays, and models covering every aspect of railway operation and history. It was soon time to depart and our coach made its way along a narrow lane which was the only route to the site for the many locomotives, coaches, and buildings which had been brought in to help create a fascinating and memorable collection.

### **Wednesday 15<sup>th</sup> June 2005**

#### **Evening visit to Dodwell Hill underground quarry**

This visit was a repeat of the one last year (see 2004 Journal) to enable those members who couldn't be fitted in then to have another chance to see the quarry. About 12 people took advantage of this and were fascinated by what they saw and heard. We were again grateful to GSIA member Arthur Price for arranging and conducting the visit.

### **Tuesday 5<sup>th</sup> July 2005**

#### **Morning visit to ARJO Ltd in Gloucester**

The ARJO factory makes a range of products used in lifting and handling patients in hospitals and care homes. This visit during the company's working time gave a small group the opportunity to see the various stages of assembly and testing of some very cleverly designed equipment. After a brief introductory talk about the company, its 40-year history and its premises in several countries around the world, we had a demonstration of one of the lifting appliances. These come in various designs which allow people with different degrees of immobility to be assisted with moving around, bathing, and toileting. The principle is to make the lifting and handling safe and comfortable for the patient and safe and simple to use for the nurse or carer without the risk of them suffering strain or back injury. A high standard of manufacture, testing and quality control is crucial to providing reliable and safe equipment. With 14 product lines, each the result of previous research and development and consultation with healthcare specialists, there are hundreds of component types - structural items, fixings,

battery systems, motors, control devices, slings – and monitoring of batches of parts and assemblies through the various stages is essential. All components are made elsewhere, with about a third from UK companies, and initial inspection leads into treatment and painting of metal parts and then assembly and testing of each individual appliance. The company is proud of its modern metal finishing process, on a continuous overhead conveyor arrangement, which starts with cleaning and preparation using an iron phosphate treatment and then goes on to a solvent free finishing stage. The paint is in the form of a fine powder which is sprayed onto the components as they pass through a chamber hung on the conveyor with an electrostatic charge between the powder and the metal causing the powder to adhere. The conveyor then takes the parts through an oven where the powder is fused to form a smooth, tough coating. The cleanliness of the process meant that we could see the system in operation at close hand. Each appliance is rigorously load tested and the safety functions, such as emergency stops and cut outs, also checked and documented. A range of body slings is also produced with capacities up to 40 stone. These are made in China, and a special testing machine loads each sling with a torso shaped block to check that the fabric, tape webbing and fixing hooks are suitably strong and reliable. Each lifting appliance has a final checking stage, including a verification that the documents and certificates are correct, and this is followed by packing and despatch.

We had all been impressed with the factory and the way it worked, especially the high standards of quality inspection and testing, and we thanked Keith Parker, who had arranged the visit and had guided us around, and his colleagues who had all made us so welcome.

## **Tuesday 26<sup>th</sup> July 2005**

### **Evening walk around Cheltenham**

Elaine Heasman and Geoff North of the Cheltenham Local History Society (and new GSIA members) had kindly agreed to lead our social evening walk and about 25 members met on a dry but cool evening in the Promenade. Elaine gave us a brief introduction and suggested that we took time as we strolled between the main features to have a good look at the buildings we passed, noting the frontages, roof lines and ornamental iron work. We saw a number of important buildings and heard about their history and changing usage. A full report is beyond the scope of this article but the notable buildings and sites seen included the former Post Office and the Electricity substation in Clarence Street, John Dower House in Crescent Place, Oriel Lodge and the Town Hall. By St Mary's Parish Church we saw one of the "onion and dragon" lamp posts and, on the path alongside the church, some curious measurement marks, small brass strips, apparently used when a market stood on the site.

We saw just the end of a stone wall reminding us of the site of Sherborne Market in the High Street, and opposite a recent building displaying in large letters "Centre Stone" which originated as a feature of an earlier structure marking the exact centre of the town. Going along the High Street we passed the sites of the Assembly Rooms (now Lloyds Bank) and the Plough Inn, from the coaching days, (now the entrance to the Regent Arcade). An unusual pavement feature was a pair of short iron posts which were actually ventilation shafts for an underground transformer which formed part of the early electricity distribution system. Turning off the High Street we came to the site of Barrett's Mill. Most of the structures, including a chimney dating from the period when steam power had been installed, are long gone but we could see part of the building (now a residence) still standing alongside the



tumbling waters of the River Chelt. The GSIA Journal of 1993 gives a full account of this and other Cheltenham mills.

Continuing through Sandford Park, and noting their fine entrance gates with the town crest, we came to The Playhouse Theatre, originally the Montpellier Baths and Salts Manufactory, and some early pictures clearly showed that much of the façade was unchanged. It was then back to the Promenade and the famous Neptune fountain, erected on the site of one of the town's spas. After thanking Elaine and Geoff for a very interesting and enjoyable tour, several members made their way to the Bayshill Inn for some welcome refreshment and further discussion of Cheltenham's fascinating history.

### **Sunday 14<sup>th</sup> August 2005**

#### **Afternoon Walk, Mills of the Little Avon (part 3)**

This was the third in a series of walks covering the mills of the Little Avon river which began in 1996 by looking at the various sites and buildings along the Ozleworth Stream and on towards Kingswood. In 1998 we continued from there and went on to Huntingford mill near Charfield. Although it had been intended to continue the series after a year or two, the outbreak of Foot and Mouth disease caused our plans to be revised. We were again grateful to Ray Wilson for arranging the present walk and about 20 members met at Huntingford Mill on a fine afternoon. While this had still been a hotel/restaurant in 1998, it is now in residential use and the owners had kindly agreed to give us access to the interior to see some remaining machinery.

Before going inside, we looked at the watercourses and pond and saw some old maps and photographs, this leading to much discussion about the general layout. We heard about an elevated track which had linked the nearby railway (the Gloucester to Bristol main line) to the top of the mill and was used to bring in corn for grinding. All that remains is a luccam door and its canopy high in the wall. Inside in the basement we were able to see one of the overshot wheels, the end of a launder (the supply leat has long been blocked) and some adjacent drive shafts. There was also some gearing connected to the drive shaft of a second wheel, this being located about 5m away and at right angles to the first wheel. Returning outside, we could see this wheel as well as the common discharge chamber, now heavily silted up.

We then went by car to a point near the village of Stone before walking back to visit the site of Middle Mill (next downstream from Huntingford). The watercourse was just visible with some stonework showing the position of a sluice, and the only remaining building was in a poor state and thought to be a stable. Continuing by the side of the river we came to Stone Mill and the adjacent Mill House. Both of these are now converted for residential use but we could see the watercourse, a side pond similar in situation to the one at Huntingford, and an arched opening into the former wheel pit. Several millstones were seen, forming garden features to remind us of one of the principal purposes of the mills in the area. On the opposite side of the mill building we saw a date stone "WI 1796" high on the main wall. It was a short walk back to the cars and a return to Huntingford Mill where the owners had kindly laid on welcome cups of tea. We heard a little more about the recent history of the mill and the surrounding hamlet before thanking our hosts for their hospitality and Ray for his most interesting guided walk. The intention is to have a further walk (part 4) in 2006, starting at Stone Mill and continuing downstream to Berkeley Pill.

## **Sunday 4<sup>th</sup> September 2005**

### **Afternoon Walk, Cricklade**

About 30 members assembled for this town walk, led by John Samways of the Cricklade Historical Society. GSIA member Alan Strickland had made the arrangements and had also produced a very comprehensive handout with notes and photographs covering all of the buildings and sites seen on the walk, as well as a summary of the town's long history. This report can only cover some of the main features and industrial highlights.

We saw the remains of some earthwork ramparts which surrounded the town in Saxon times and then a brick bridge which formerly carried the Midland and South Western Junction Railway on its way between Swindon and Cirencester. Moving back into the town centre, we passed the impressive 1933 town hall and many fine buildings including the former home of the glove factory run by Charles Ockwell, one of the main industrial employers, from 1933 to 1996. At St Samson's Church we admired the 16<sup>th</sup> century tower on which was carved a large pair of shears as a reminder of the earlier links with the wool trade. We saw a 17<sup>th</sup> century school building, founded by London goldsmith Robert Jenner, the town's MP, and heard how it had become a workhouse, then a school again and is now the Parish Hall.

Continuing along the High Street we passed a number of buildings typical of a small but prosperous town, including coaching inns from the days of the turnpike road improvements. Passing Gas Lane, the only reminder of the town gas works, we came to the bridge over the narrow stream of the Thames. We were able to go along a private drive alongside the river and heard about several nearby small industrial sites, including a foundry, a tannery, a carriage works and a forge. We saw an old wheelwright's stone which was used for fitting iron tyres onto wooden wheels. The heated tyre was placed over the wheel using the stone as a solid base and then quenched to tighten it onto the rim. It was then back into the town centre and we finished at an 1853 Baptist chapel which now houses the Cricklade Museum, a small but fascinating collection of local artefacts, exhibits and archives run by the Cricklade Historical Society. After a brief look around we were grateful for the welcome cups of tea which our hosts had laid on, and we finally thanked both Alan and John for a very enjoyable and informative afternoon.

## **Sunday 25<sup>th</sup> September 2005**

### **Coach trip to the Mendips and Radstock**

Numbers were lower than we would have liked for our autumn coach trip, but those who came had an interesting time, mostly with fine weather. We were grateful to Geoff Fitton of the Somerset IAS for helping to plan the day, for showing us around the lead and zinc mining areas of the Mendips, and for pointing out some interesting features en-route.

We met Geoff at Worle near Weston-Super-Mare, not a place one immediately associates with mining. However "lapis calamaris" (calamine or zinc carbonate), was first discovered in England at Worlebury Hill in 1566. This was the start of an important industry, as lapis calamaris was needed to mix with copper in order to produce brass at a time when England was dependent on imports from the Continent, politically vulnerable after the Reformation.

Our first stop was Shipham where zinc mining started in the 16<sup>th</sup> century. We viewed an extensive area of "Gruffy Ground", humps and bumps and shallow depressions where calamine had been mined. We were also able to visit the entrance to a mineshaft in a private

garden. These mines were not bell pits; the tunnels at the bottom of the shafts followed the veins of calamine producing a 3-dimensional maze underground.

From Shipham we moved on to Charterhouse, an area of lead mining for at least 2000 years. The earliest Roman lead ingot found has been dated to AD50, but the industry is probably pre-Roman. The early and mediaeval smelting processes were very inefficient. In the 1800s improvements in smelting technology made it possible to recover lead from ores having a lower concentration and the earlier waste tips and slag heaps were re-worked. Velvet Bottom, the first area of workings visited dates from this period. Here, waste from earlier workings was reprocessed by “buddling”, where waterborne material is made to settle out thus concentrating the ore remaining in it. Work stopped in the 1880s but arsenic and lead from the wastes still pollutes the grass in the valley.

A short distance uphill we visited a large area of “Rakes” where intensive mining of galena (lead sulphide) lodes has produced a dramatic landscape of miniature Cheddar gorges some 20 - 30 feet deep, closely interspersed with the remains of numerous shafts. These mines were at their peak from 1500 - 1700 but their origins are much earlier. When the galena began to run out, the lead miners found new employment in the expanding calamine mining industry around Shipham.

From the Rakes we walked on to a lead smelter dating from the 1800s where slag from earlier workings was re-smelted. There are impressive remains of the two 500 metre brick-built tunnel flues on which the lead was deposited after smelting in a blast furnace. Blocks of slag were seen around the site and the paths are made of broken, black, glassy slag.

On the way to Priddy where a short lunch break was taken, the coach stopped briefly at the site of the Stock Hill works where there had been two smelters. Then it was on to the Radstock Museum with its excellent displays and collections relating to life and work in the areas of the North Somerset coalfield. As well as seeing agricultural and household exhibits of general interest, the party were given a short talk on work in the mines from a former colliery engineer.

We returned to Gloucester via Bristol, dropping off Geoff at Temple Meads station after thanking him for giving up his Sunday and for being a most interesting and enthusiastic guide. It was a pity that more members did not come along, as this was a very enjoyable day out. Don't be put off these trips if you are a non-specialist; many GSIA trips take us into beautiful areas of little - known countryside and have plenty of general interest.

### **Sunday 2<sup>nd</sup> October 2005**

#### **Afternoon Walk, the Plump Hill area**

There was a good attendance for the final walk of the season and we were grateful to Dave Tuffley of the Forest of Dean Local History Society for showing us around. We met at the top of Plump Hill and made our way to the shaft, now capped, of the Westbury Brook iron mine. We heard about the extensive ironstone deposits in the Crease limestone which were mined from the early 19<sup>th</sup> century with workings at 4 levels, the lower 2 under water. Moving on to the Fairplay cottages we heard of the 1856 brickworks which had been nearby and the tram road routes which had been used to transport the ironstone from Westbury Brook to Cinderford. A short walk took us to the impressive masonry structure which had housed a “bull” pumping engine above the shaft of the Fairplay iron mine. This had been developed at

great expense by Henry Crawshay to reach beneath the levels of Westbury Brook but which had never yielded any ore. Nearby was the footing of an access and ventilation chimney for the mine.

We saw the site of Tingle's iron mine, with its 5' shaft top, which had mined iron ore from a thin vein within the sandstone, and then moved on to a large rocky depression which descended into a cave which gave access to the Westbury Brook mine. As we gathered around the protective fence, we heard about Dave's caving experiences and how parts of this system had been explored. As he was telling us that it was now the habitat of a colony of bats we were all amazed to see an owl emerge from the depths and fly up into the woods, a nice bonus sighting.

After a short detour to see the site of another shaft of the Westbury Brook mine we approached the grounds of a private residence to hear about a disastrous event here in 1913. This was a sudden earth collapse above a churn (or cavern) of the Westbury Brook mine which left a large hole about 60 yards across and up to 40 yards deep. The disruption and damage to adjacent properties was extensive though no lives were lost. Dave explained that some of the mining activities resulted in huge caverns being created, with attendant risks of subsidence. It was then on to the final site, a quarry to the north of the main road, to hear about a tragic incident from 1872 when the owner Aaron Symonds had planned a single blasting operation to extract a large amount of dolomitic limestone. The idea was to fire about a ton of gunpowder in one charge and news of the event attracted many spectators. After the blast, which was very effective in dislodging a massive amount of stone, one of the quarrymen approached the area but was stricken with noxious fumes. Other men tried to rescue him but three of them also succumbed to the asphyxiating fumes arising from the explosion.

We thanked Dave for a most interesting walk and his fascinating stories of a period when working life was, for many of the miners and quarrymen and even for those just living in the area, a hazardous business.