



NEWSLETTER No. 72

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PROGRAMME OF VISITS FOR 1991

Saturday 19 October 2.30 pm Visit to Brighton Railway Museum, off Highcroft Villas (TQ302060), followed by talk on the L.B.S.C.R. to commemorate the 150th Anniversary of the opening of the London to Brighton railway line. Contact R.G. Martin (0273 303805)

Saturday 23 November 2.30 pm A.G.M. at Friends Meeting House, Friars Walk, Lewes (TQ426200), then a talk on "Cliff Lifts" by Mike Tighe

For all visits it is IMPORTANT that the contact person knows how many people are coming, so please let him know at least 7 days before the visit of your intention to attend.

Additional event

Saturday 16 November 2.15 - 5.30 pm "DISCOVERING AND RECONSTRUCTING THE PAST IN KENT" at CHRIST CHURCH COLLEGE, NORTH HOLMES ROAD, CANTERBURY
An afternoon of talks including the Historic Dockyard, Chatham and Crabble Corn Mill, Dover, illustrated by colour slides and displays. TICKETS: Price £1 (payable Council for Kentish Archaeology), further information from C.K.A.
5 Harvest Bank Road, West Wickham, Kent BR4 9DL (s.a.e. please)

COULTERSHAW PUMP

We have had a good season, with visitor numbers about the same as last year. In spite of prolonged dry spells there has always been sufficient flow to drive the pump. There were special open days; the first, on a Wednesday morning, was for 70 children from the Hart Shiner School in Petworth. The next was National Mills Day and the third, in June, was for members of the Petworth Society, who in spite of torrential rain turned up in such numbers as almost to embarrass our five guides. The team from High Salvington Mill also came then; as their normal open days coincide with ours we cannot easily visit one another!

We anticipate receiving more requests for school visits and regard this as a welcome and healthy trend.

Once again it is timely to thank all those who have helped with the maintenance and stewarding at Coultershaw. Apart from the intrinsic interest of the beam pump itself, the whole set-up is a good "platform" for IA and provides opportunities to recruit new members to our Society. Additional helpers are always welcome - please don't leave all the work to the dedicated few!

MICHAEL PALMER

MEMBERSHIP CHANGES

New Members

CHEWELL, R.T. 60 Nelson Road, Goring-by-Sea, Worthing, West Sussex BN12 6EN
CLARK, I.M. 9 Clermont Road, Brighton BN1 6SG
FRANKS, E.B. 274 Willingdon Road, Eastbourne, East Sussex BN20 9JR
HAYWARD, M. 170 Buckwood Drive, Gossops Green, Crawley, West Sussex RH11 8JF
MERICAN, Mrs D.Y. 20 Buckingham Road, Shoreham-by-Sea, West Sussex BN43 5UB

Change of address

HILL, N. 1 Padstow Walk, Sewbush, Crawley, West Sussex RH11 8RZ

OFFICERS

President A.J. Haselfoot
Chairman Air Marshal Sir Frederick Sowrey, Home Farm, Herons Ghyll, Uckfield
Vice Chairman J.S.F. Blackwell, 21 Hythe Rd, Brighton BN1 6JR (0273) 557674
General Sec: R.G. Martin, 42 Falmer Ave, Saltdean, Brighton BN2 8FG (0273) 303805
Treasurer & J.M.H. Bevan, 12 Charmandean Rd, Worthing BN14 9LB
Membership Sec: (0903) 35421
Editor B. Austen, 1 Mercedes Cottages, St John's Rd, Haywards Heath RH16 4EH (0444) 413845
Archivist P.J. Holtham, 12 St. Helen's Crescent, Hove BN3 8EP (0273) 413790
Publicity G.E.F. Mead, 17 Hollingbury Park Avenue, Brighton BN1 7JG (0273) 501590
Mills Group:
Chairman B. Pike, Stream Cottage, Coggins Mill, Mayfield, East Sussex TN20 6UP (0435) 873367
Secretary D.H. Cox, 3 Middle Road, Partridge Green, Horsham RH13 8JA (0403) 711137
Committee F. Gregory, P. Hill, J. Muddle, P. Pearce, S. Potter, T. Martin

Area Secretaries

Eastern Area -
Western Area R.M. Palmer, 11 Arlington Close, Goring by Sea, Worthing BN12 4ST (0903) 505626
Central Area J.S.F. Blackwell, 21 Hythe Road, Brighton BN1 6JR (0273) 557674
Northern Area E.W. Henbery, 10 Mile Close, Langley Green, Crawley (0293) 23481

COMMITTEE MEMBERS

B.Austen, Brig.A.E. Baxter, Mrs.P.M. Bracher, C.Bryan, D.H.Cox, Mrs.D.Durden, F.W.Gregory, E.W.Henbery, P.J.Holtham, G.E.F.Mead, R.M.Palmer, G.G.Thomerson, M.F.Tighe.

Copy for the Newsletter should be sent to:
G.G. Thomerson, 42 Gander Hill, Haywards Heath, West Sussex RH16 1RD (0444) 450722

Copy for Mills Group section should be sent to D.H. Cox whose address is above.

LATEST DATE FOR COPY FOR JANUARY NEWSLETTER IS 10th DECEMBER 1991.

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Patcham Mill

The repair and rebuilding of the cap and sweeps has progressed well this summer. The sweeps were completed in July and can be seen in the grounds of the Enginearium in Hove until the end of October. Weather permitting, we will be putting the cap back on in October. Until then the works may be viewed at the Enginearium by arrangement with me on (0273) 554070.

TIM MARTIN

SUSSEX GUIDED WALKS

Another summer season of guided walks comes to an end and each year they seem more popular and varied than before. Almost every day winter and summer from Thorney Island to Rye Harbour and Rudgwick to Lancing Beach, there are walks conducted by locals and experts - sometimes both! Some start at dawn others at dusk but nearly always by volunteer guides. They are a marvellous opportunity to see and hear about the county and as is obvious to those of SIAS who attend them, a good chance to see often hidden IA gems!

A winter walk programme starts on Saturday 19 October and on the 20th I start my programme with a walk along Brighton front and then on the first Sunday of each month to other areas of the town.

The money collected from these walks goes to various nominated societies, including SIAS, but whatever society receives the cash, there is always a strong IA element in my series!

Booklets are available from local libraries and information centres from early October - I hope to see some of you at the walks - and your money!

GEOFFREY MEAD

MEMBERS EVENING 1991

About 40 of us met at the new Steyning Museum on Saturday 20 July where we were greeted by Mr Harry Ford who spoke about the work of the Friends of Steyning Museum particularly relating to the transition from the old museum in the High Street to the present building which was opened recently. The collection has grown in size, variety, and interest over the years. Mr Ford said that the policy was to stage small special exhibitions from time to time to ensure local interest was maintained. The current exhibition was centred on memorabilia of Elsie and Doris Waters ('Gert' and 'Daisy' of radio fame) who lived in the village. As Mr Ford was speaking on Steyning mills, Frank Gregory made what appeared to be a stage-managed late entry, right on cue to elaborate on the subject. Capt. Alan Smalley then told us of his own dwelling - Court Mill just outside the village.

Following our look around the museum we were invited to Diana Durden's home where refreshments were provided, during which we were able to look at an exhibition of Leslie Martin's photographs of various SIAS visits. We were then shown the video of Blabers' Brighton foundry which is still working in Portland Street. Copies of this are available at £12 per copy from Hanover Video Club, 21 Poynter Street, Brighton BN3 7AH.

Various other videos of IA interest were shown in the two rooms made available for this purpose. The visit was not complete without an inspection of Philip's (Diana's elder son) collection of miniature cars, and cigarette and beer packaging materials. His model of the family home must be seen to be believed (by appointment only through Diana please).

Our grateful thanks are due to Mr Ford, and to all the Durden family, Alan (Diana's husband) was backroom boy setting up the equipment, but Andrew (Diana's second son) couldn't stand the SIAS invasion, so he spent the evening with his girl friend, to Diana and Lyn Cox for the catering, to our Chairman who kept his hand in with the washing-up assisted by several ladies, all of whom contributed to make this such an enjoyable event.

GORDON THOMERSON

MYSTERY MILLS TOUR, SATURDAY 17 AUGUST 1991

A group of members met at Woods Mill Henfield as the start of a tour of several mills. After we were welcomed by the curator who talked to us about the mill and its restoration, we were able to inspect the mill and watch the wheel turning.

Our next destination was Shermanbury, where we endeavoured unsuccessfully to determine the position the water wheel had occupied, and the flow of the water to it.

A lunch break then followed, and we met again to travel a few miles further north to visit what I believe could be a unique wind pump in this part of England. Of French origin, it was constructed on a central cast iron pillar, braced by solid iron stays. A spiral

staircase built around the central pillar gave access to a platform on which was mounted the wind wheel and fan gear. The whole structure is still very solid except for the blades of the wheel and an outer rim. These have almost completely rusted away. It would be a great pity and loss if this structure is allowed to deteriorate further and no steps are taken to preserve it.

Finally we visited Mr Muddle's mill at Plumpton, where he received us most kindly, giving us a talk on the restoration of the mill, illustrated by photographs. Mrs Muddle provided us with refreshments which were very much appreciated, after which Mr & Mrs Muddle, took us around their property, and we were able to examine an old cider press which he had salvaged and was stored in a barn.

In all, a most interesting and enjoyable day's outing was had by everyone.

PETER PEARCE

TYPOLOGICAL SURVEYS

As you are probably aware the Society now has a full time Industrial Archaeology Recorder, Dr Cox, who is at present covering all the rural areas of the counties. This is being tied out parish by parish and covering all facets of Industrial Archaeology.

Another aspect of recording which the Society has not yet fully exploited is that of Typological Surveys. It is certain that various members will have done a certain amount of research into particular subjects of interest to them and it may be that other members would be interested in undertaking such investigation.

This research should cover all aspects of the particular subject, going into the history and looking at all the extant examples within the designated area and comparing these results with examples outside our area. These investigations would be supplementary to the work being done by the Recorder although of course there would be some overlap, but these typological surveys would go much deeper into the subject in question than is possible with the Recorder's survey. The results of such surveys could be the subject of articles in Sussex Industrial History and form a valuable contribution to the knowledge of the industrial history of the county.

Subjects which could be looked into are as follows:

foundries, sea defences, wind pumps; bus garages; village water supplies, WWII pillboxes; public houses; lamp-posts; schools. There are many more that could be considered.

If any members have already undertaken such research or would like to do something like this, I would be grateful if you would get in touch with me.

RON MARTIN

BRIGHTON 150

Continued from Newsletter No. 71. The extracts are from the Brighton Gazette for 1841. The half-yearly meeting of the Proprietors of the Company was held on 12 August when the following facts and figures were reported.

"During the first week after opening the line, 2483 passengers were conveyed upon it and receipts amounted to £925.5s.9d. In the second week 3249 passengers and the receipts £1220.17s.3d. In the third week 4367 passengers and the receipts £1590.0s.2d. and in the fourth and last week 5297 passengers and the receipts £2140.15s.10d. thus showing a gradual and satisfactory increase"

Construction costs had increased due to heavy earth slips from £2,070,000 to £2,320,989. Works south of Haywards Heath were reported as finished except for dressing off the embankment slopes and the completion of laying the rails. At Brighton "The Booking-Offices and Iron Roofs, with the approaches to the station are finished, the Turning Tables are fixed and it only remains to lay the rails in the approach to the Station, and under the sheds; and put down the Platforms for the Passengers. The Lower or Coal Station at Brighton is now complete ..."

An extract from the Railway Magazine for Saturday 4 September reports a trial trip in a new first-class carriage "the invention and design of Captain Beauclere, one of the Directors, whose chief object is to get rid of the noise and rolling incidental to the present railway carriages."

The opening throughout, following an inaugural run by the Directors on the preceding day, was obviously a carnival time for the inhabitants of Brighton and the surrounding villages and events are reported by the Gazette on 23 September. "From Preston to Brighton the train passed between crowds of spectators who filled every space adjoining the line from which a view could be obtained. The field of New England, westward of the line, was also densely crowded and the same was the case with New England Road, where also a great number of carriages and flies, 100 at least, were drawn up in file. Proceeding onwards to the Terminus, we observed the whole of the beautiful sheds, the iron roofs which have been so much admired; densely packed with thousands "(?)" of fashionables and the most influential of our inhabitants. From the gable of the centre shed were suspended a large floral star and banner inscribed "Welcome to Brighton". At the moment the train reached the Terminus the band of the Scots Greys and the town band struck up "God Save the Queen", the amateur vocalists singing the National Anthem, verse and chorus, alternately with the instrumental music. A large number of inhabitants also lined the foot-path over the hill from the Terminus to New England; and the neighbourhood of Trafalgar Street and Surrey Street was filled with respectable persons who were excluded from Terminus in consequence of the applicants for tickets being so numerous, the Terminus could not contain them." In the evening there was a fete at the Royal Gardens and a firework display.

The first timetable showed trains leaving at 6.45 am mixed (1st and 2nd class), arriving at London Bridge at 9.15 am; an express at 8.30 am arriving 10.15 am; 10.45 am, 1st Class, arriving 12.45 pm; 11.45 am mixed, arriving 2.15 pm; a 2.15 pm 1st class departure arriving 4.15 pm and lastly a 4.00 pm mixed departure, arriving at 6.30 pm. Sunday departures were 7.45 am, 4.00 pm and 7.00 pm. Fares were 14s6d 1st class, 9s6d 2nd class; single. During the week ending 30th September 7191 passengers travelled.

It was not long before the first accident which occurred on 2 October, was reported by the Gazette. In its 7 October edition was printed "We regret to say that an accident attended by the loss of four lives occurred at noon on Saturday last in Copyhold Cutting, between the Ouse Valley Viaduct and Haywards Heath. The train was drawn at the time by two engines, one of six wheels manufactured by Fairburn of Manchester, the other of four wheels made by Bury of Liverpool. While on its way to Brighton, the latter engine, which was in front, suddenly ran off the rails and buried itself in the bank and a violent concussion was the consequence, three carriages being smashed, one of them, that next to the engine, in a most extraordinary manner. The carriage had a centre compartment fitted up in the first class style, and on either side was an open compartment in the style of the second class carriages. Both these were crushed to atoms but by a Providential singularity the centre of the carriage was uninjured and the passengers in it sustained little inconvenience beyond being thrown each against his opposite fellow traveller." The possible cause was a loose wheel on the four wheel engine and the jury returned a verdict of accidental death with a recommendation that the company discontinue the use of four wheel engines. At a subsequent Board Meeting this was agreed, together with an order to place a luggage van between the tender and the first passenger carriage in every train.

Following the accident appeared a series of notes and correspondence concerning the safety of the line in which the Board and its experts supported by The Gazette refuted the 'unsafe' allegations being made by another local paper, The Guardian. There were obviously strong feelings as a group of the town's leading citizens undertook a trip to report "on the real state of our Railway to our fellow townsmen and the public."

On 1 November a revised timetable was published showing departures at 8 am mixed; 9.30 am mixed, stopping (at all stations rather than principal ones); 10.45 am, 1st class, 11.45 am goods; 1.45 pm mixed; 3.45 pm mixed. The accompanying notes stated "Second class passengers will be conveyed by goods' trains for 7 shillings each throughout", and "Day tickets will be issued to and from London and Brighton, first class 20s, second class 15s"

And so ended a momentous year for Brighton inhabitants during which thousands of local inhabitants saw for the first time the "iron horse" which to London cut journeys at a stroke by four hours. With fares being much more than several weeks wages, it is unlikely that many would foresee that within a generation rail would become the accepted method of travel available to all but the poorest; or indeed that within a century, horse transport would be a thing of the past. After 150 years the alignment remains the same. It is to be regretted that within the past twenty or so years, many of the Victorian stations have been destroyed to be replaced with so called "functional structures designed to meet the modern travellers needs"; little shelter, no coal fires, no platform staff, and soon no ticket issuing staff, if one can call the present computer produced ones, tickets.

Concluded.

JOHN BLACKWELL

THE MAYOR'S PARLOUR - AND I.A!

The Mayors of Brighton are not the people one usually turns to in researching Industrial Archaeology, but such is the widespread importance of our interest that the systematic study of the Borough leaders reveals a host of facts.

Brighton Reference Library, there is a fascinating booklet filed in Sussex Pamphlet Box 0, document number 3 - Portraits of Mayors of Brighton (1904). This commemorates the 50th anniversary of the formation of the Borough and is an informative catalogue of the portrait exhibition held in the Museum. In chronological order the mayors are listed with pocket biographies that contain much of interest in their business lives. Members will no doubt find connections in the volume that I failed to note and I would be interested to read in future Newsletters of those omissions.

William Hallett	born in Rotherfield, traded as a builder and farmer before establishing a steam-brewery, a partner with his son, also William Hallett, and Henry Abbey. He also built the original Bristol Hotel on Marine Parade.
Isaac Gray Bass	his father Isaac Bass founded in 1804 the business now carried on by Messrs Wallis, Holder & Lee (wholesale provision merchants, Market St). He had a good deal to do with the formation of the canal from Shoreham to the Aldrington Basin.
William Alger	a draper in St James Street.
Henry Smithers	born in Preston 1807, one of the originators of West Pier Co. and of Smithers and Son, North St brewery.
John Leonhardt Brigden	born in Brighton 1814, coachbuilder (premises off Regent Hill, Western Road).
Henry Martin	born Ringmer 1813, saddler and harness maker, father started in North St 1815. He opened the West Pier on 6 October 1866.
William Henry Hallett	born Brighton 1827, son of brewer William Hallett.
Thomas Lester	grocer, St James Street.
Arthur Hawker Cox	born 1813 London, a chemist of 32 Ship St from 1839 (Cox lived for a while in London Road at No 15. He had a factory next to the viaduct in Lewes Road, since demolished for a Sainsbury's store).
James Ireland	born 1811 Horsham, builder and wood merchant, a Wesleyan. Opened first (?) saw mills in Brighton in Edward St.
Henry Abbey	brewer, had Queen's Park laid out on 17½ acres of land from Race Stand Trustees.
Henry Davey	born 1829 Brighton, leather merchant, Edward St.
Samuel Henry Soper	born 1837 Brighton, the first telegraph clerk at Brighton Station. In 1860 started business as a draper at 80 North St (premises later became Gunn's the hatters).

John Edwin drove first tram along Lewes Road.
Stafford

There may be similar material available for the other Boroughs of the County and it would certainly be interesting to hear if members know of any.

GEOFFREY MEAD

EAST SUSSEX ENGINEERING CO. (formerly John Every), LEWES

Earlier this year I had the good fortune to be introduced to Alec Boyes, the former Managing Director of ESE, the famous Phoenix Iron Works of Lewes. Mr Boyes told me something of his life and of the trade of the foundry and this article is only a fragment of a marvellously informative interview, which I hope to write up in an expanded form later.

John Every founded the firm in 1815 having come south from Grantham, Lincs (still an engineering town). His original foundry in Station St, Lewes, burnt down and the new site by the river was obtained with help from the Methodist community. The firm arising from the ashes took the name Phoenix Iron Works in a similar style to the Phoenix Brewery of Richard Tamplin which burnt down in Brighton in the 1820's.

The firm prospered, and in the Regency renaissance of iron work, and the Victorian period that followed, Brighton was a huge market. According to Mr Boyes - "we built Brighton, iron work for the pier, iron work on the front, lamp standards on the front, ornamental iron work, as well as wrought iron work and a lot of 'roadwork' - manhole covers."

ESE employed nearly 300 people with a thriving engineering side. There were contracts for sewage equipment, filters the size of double decker buses and constructional steel work, including the steel framing for Allen West. During the late 1950's Mr Boyes thought they should concentrate on fewer items and not be too fragmented. They remained steel stockholders but concentrated on mechanical engineering.

After WWII they had built a mechanised foundry which became a 'white elephant'. The plant was too far from the main market in the Midlands, though they had a good market supplying Allen West. Work was mainly in 'floor-work', machine castings and machinery.

In the late 1960's the scheme to build the new Lewes road bridge - the Phoenix Causeway - meant the loss of a large area of the works, especially the site where the sewage plant arms were assembled.

The firm was taken over by Aurora who eventually sold off the remaining land leaving only small foundries in the area, notably Blabers non-ferrous plant in Portland St, Brighton and the Haven Foundry in Newhaven.

An interesting part of Mr Boyes' fascinating memories was the supply of raw materials for the firm. The site by the river meant a great use of shipping and barges which came up river from Piddinghoe wharf. (A photograph and letter in the Sussex County Magazine February 1952 shows a schooner tied up at Piddinghoe with a cargo of pig-iron on the wharf bound for Every's).

Coke was unloaded at the railway goods yard but later it was cheaper to bring it straight into the yard by road from Wales. In former times a barge of coke stuck under Lewes Bridge and the rising tide lifted the barge and cracked the bridge!

Pig-iron came from Workington, Consett and Ford's at Dagenham and steel from Redpath, Brown of Sheffield.

Mr Boyes is an engineer to his fingertips, leaving school at 14 in Eccles, Lancs, and working for Naysmith-Wilson locomotive works building steam hammers. Moving to Metro-Vickers and to B.R. rail-line foundry at Bolton, he came to Lewes in 1955 and retired when ESE closed. Though he was offered a job back in the north at Sheffield, he "didn't want to go back."

I would like to thank Alex Boyes for his time and encyclopaedic memory!

GEOFFREY MEAD

COMPLEX SURVEY OF INDUSTRIAL ARCHAEOLOGY
(with support from the Leverhulme Trust,

Report for the first three months, June to August 1991.

After three months of hard work (and yes it is tiring being out all day photographing and recording), I feel that a good impact has been made and that the brief to cover all rural sites will be achieved in the two years of the project. The initial work included setting up the systems to carry out the work in a methodical way to ensure that each parish is covered and covered completely, all photographs taken are recorded such that the negatives are traceable and that the records produced are kept in some form of accessible order.

As the site record content includes the parish, I have decided to work on a parish basis. I started with my home parish, went northwards to the border with Surrey and am now working mainly in an anti-clockwise from there.

So what have I achieved?

Of the 250 parishes I have visited 50 (mainly those in the north of West Sussex).

In those parishes I have photographed approx 580 sites and completed 480 record sheets. The difference in these two figures is because I have purposely got ahead of myself in order to cater for the rain days (which really have not come so far).

I find the work very interesting and so far few surprises. The first and main surprise was that my own parish of West Grinstead has yielded 45 sites. This is due in the main to having had in the past a railway (4) and a river/canal (9) through the parish as well as a good number of shops (12), schools (2), public houses (6) and mills (2). I thought it was a small quiet parish where nothing ever went on. The average seems to be about 10 sites per parish. But this is the small parishes. I recently surveyed the parish of Keymer and this includes Hassocks. This was a large parish with 26 sites and I have not finished yet.

There is no doubt that as well as shops, the presence of a railway and/or a river greatly increases the number of sites. However I am still looking for the ideal parish with no sites but have not found one yet. The nearest is Coombes with one. One of the main problems is what to include and what to leave out, mainly due to the date of build or use.

I must include a word of thanks to my wife. She usually accompanies me on the trips out and as well as writing the notes that I give her, she also provides the extra pair of eyes to see the things that I miss. I have recently been given a small hand-held dictating machine. This will be invaluable when it rains and the pen will not write but I am sure that it will not make my wife redundant.

Finally a request for the following that would make my work easier:-

A John Bull printing set.

Telephone directories for Portsmouth, Guildford and Tunbridge Wells areas. Your old last year's one would do but I only require one of each. Alternatively the latest Thompson Directories would help.

A projector screen (which I would be willing to purchase).

A dictating TRANSCRIBER

DON COX

A.I.A. CONFERENCE AT DUDLEY, 1991

This year's I.A. Conference, held at the Dudley campus of the Wolverhampton Polytechnic broke all records for numbers attending as there were some 180 delegates. We visited some 20 different sites, five working factories or workshops and six museums. We went on a steam train (Severn Valley Railway) and two canals (Dudley Canal Tunnel and Birmingham Canal), saw various films and videos and had 16 talks or lectures.

The Black Country is the home of many important industries, some well known such as iron and steel, coal mining and motor cars, but there are many others such as nailmaking, jewellery in Birmingham, leather in Walsall, glass in Stourbridge, chain making in Cradley Heath, lock making in Willenhall.

The highlights of the week for me were the visit to Hooper & Hucker, curriers, who prepare hides for use in the leather goods industry and the chain makers using modern electric welding equipment and mainly staffed by women. There was also the delightful town of Stourport at the junction of the Staffordshire and Worcestershire Canal and the River Severn where there were six basins all interconnected and surrounded by many late 18th century buildings. Much was still extant. At the Black Country Museum the replica of the Newcomen engine was in steam and the rolling mill operating. The canal trip through the Dudley Tunnel culminated in a traditional supper of faggots and mushy peas with appropriate local entertainment.

In Birmingham we walked round the jewellery quarter where many small workshops are still working and visited the Discovery Centre where an old jewellery workshop is being prepared for reopening next year as a "time capsule" but where working jewellers will be operating. During the visit to the Birmingham Science Museum there was a special steaming of the Smethwick engine.

The Rolt Memorial Lecture on Sunday morning was by Keith Gale on "Researching Iron and Steel - a personal view". Mr Gale has spent all his life in the industry and is probably one of the most knowledgeable persons alive. He has very strong views about the philosophy and methods of research.

There were 13 Sussex members at the Conference, although six of these were out of county members. We will be very pleased to see more of you at Cheltenham next year. These Conferences are really most enjoyable to anyone interested in industrial archaeology and who are not too parochial in their outlook.

RON MARTIN

TWO AWARDS FOR RON MARTIN

The following is an extract from a press release by the Association for Industrial Archaeology.

"Voluntary worker receives double award for recording threatened industrial monument.

Ron Martin is the recipient of both the Fieldwork Awards of the Association for Industrial Archaeology, the first person to achieve this double. Ron wins the overall Fieldwork Award, open to professionals and amateurs alike, for the quality of his fieldwork and survey on a horrendously difficult site. The Beddingham cement shaft kiln was a huge experimental 150ft. high structure with multifarious subterranean passages branching-off at unknown depths. The report makes clear that the kiln had been built as one of a series designed in the 1920s to try and reduce the high costs of large-scale cement production entailed in the early rotary kilns. This involved a reversion to earlier limekiln-type structures but on an enormous scale. Pulverized coal injected from the bottom caused an updraft in the kiln structure, powdered clay and chalk were then fed into this circulation of air within the kiln chamber. In theory this revolving mass turned into clinker and dropped down to be collected from grills in the bottom of the kiln. This prototype, built by a Dr. Geoffrey Martin, was said to need modifications before it could be used in full production. However, before this could be done, the 1920s slump eased and more money became available to improve the conventional rotary kiln. Ron Martin's exemplary drawings clearly explain the workings of this dead-end in functional evolution.

The use of this monstrous construction had been long forgotten when permission was given to fill the redundant quarry that had itself eaten into the former access passages to the kiln. Blue Circle Industries Plc contacted Sussex Industrial Archaeology Society to see if they were interested in recording this mysterious structure prior to its partial removal and subsequent burial. Ron Martin, general secretary of the society, co-ordinated work that involved initial descents by rope into the kiln void by Tim Martin. More underground passages were subsequently opened up and Ron was assisted in recording these dark depths by members of both Subterranea Britannica and the Sussex Industrial Archaeology

Society. This whole enterprise fully earns the second award of being the most enterprising fieldwork project of 1991. Blue Circle Industries Plc must also be commended for contacting a heritage group able to record this interesting structure. Many huge redundant industrial constructions are unsuited by their functional purpose and large size to adaptive reuse and the prohibitive cost of conservation may only be merited for the more significant bigger structures. Many, however, merit recording and it is gratifying to see Blue Circle taking such an active and encouraging role to see that the detail of such a site is preserved on paper.

The standard of the other six entries was high and the judges would like to especially commend two of these. Once again the Exeter Museums Archaeological Field Unit produced a masterly example of interpretative recording with the archaeological survey of The Gunpowder Factory at Powder Mills Farm, Post Bridge, Devon, carried out by A.R. Pye and R. Robinson. Practitioners at the Ironbridge Institute again also showed their mettle with the excellent drawings and good interpretative and recording work at Hadley Lodge Farm in Shropshire. The recording of the agricultural industry is often neglected and Nicola Smith and her colleagues have produced an interesting example of what might be done elsewhere.

Awards will be presented at the Association for Industrial Archaeology's Conference on Saturday September 14 at the Dudley Campus of Wolverhampton Polytechnic and will be presented by David Alderton, President of the Association for Industrial Archaeology.

The Association for Industrial Archaeology's Fieldwork Awards scheme exists to encourage the recording of the physical remains of the industrial period to acceptable archaeological standards. The Award is open to both amateur and professional fieldworkers and has successfully been operating for almost a decade."

NEWS FROM AMBERLEY CHALK PITS MUSEUM

Despite the difficult economic times, I am pleased with the number of visitors the Museum has received so far this year. It is particularly encouraging to note that the overwhelming majority of our visitors appear to have had a very enjoyable visit. In a museum like Amberley, there is always much to be done to keep the site and buildings in good condition as well as continuing the developments to provide new features for our visitors.

I am therefore pleased to report that we have been able to start the next phase of the Wheelwright's Project. This involves the re-erection of Spooner and Gordon's premises from London Road, Horsham on a site in the Museum near the existing Village Garage. Under the direction of John Land, the complex brick and stone walls are now nearing completion and we hope to have the roof finished before the winter months. If all goes according to plan our visitors will be able to see inside the building next season.

Another project underway is the rural telephone exchange. In a building by the level crossing we are developing an exhibit to show the type of exchange that was introduced in rural areas from the 1930's. It will contain 'UAX' equipment racks with the electro-mechanical Stowager equipment which the visitors will be able to see in operation.

The Museum has recently acquired an unusual monorail system from Bishops Waltham in Hampshire, in keeping with our policy of developing an industrial railway collection. This system carried materials not passengers, being used until 15 years ago to move sludge around the sewage works. It consists of a side-tipping wagon driven by a JAP engine and was controlled by a man walking beside it. The 'monorails' were incurved and straight sections which could be easily re-assembled to reach different parts of the works. It is not yet on display as it requires some conservation and maintenance work, but once this is completed we hope that it can be regularly demonstrated to visitors.

ROBERT S. TAYLOR
Director

STENNINGS' HOOPER

A note in S.I.A.S. Newsletter 58 (Oct. 1967), recorded the closure of the old-established timber merchants John Stennings & Son Ltd at East Grinstead in 1964 and at Robertsbridge in 1987.

East Grinstead Town Museum has now been given the steam whistle, always known as the 'hooper', used in the firm's local yard to regulate working hours. Its audibility in the town led to its being the regulator for other workplaces also.

It is made of brass and rather like the whistle on a steam railway locomotive. It is not known when Stennings installed it. The times it sounded were recorded in the East Grinstead Courier for 14 March 1974 as follows:

7.25	Get changed and have tools ready
7.30	Start work
10.00	Break (always known by the dialect term 'lunch')
10.10	Start work again
1.00	Dinner
2.00	Start work again
5.30	Stop work

this made a 50-hour working week, including 7.30 - 12.30 Saturday.

It would be interesting to know if any such whistles, or equivalents, are still in use in Sussex and what others once existed.

At one time East Grinstead had a steam whistle at the Hope Brewery. It is not known whether there was a time when both it and the one at Stennings were in use but in 1895 a pseudonymous complaint about the brewery whistle was published in the East Grinstead Observer for 6 April, followed the next week by letters of support for it from 'a working man's wife' and Mr T. Isley.

[Accounts of Stennings' business will be found in W.H. Hills, The History of East Grinstead (1906), p.274 and the East Grinstead Courier for 7 and 14 March 1974 and of the Hope Brewery in the East Grinstead Society's Bulletin 30 (Spring 1981)]

M.J. LEPPARD

I.A. IN DERBYSHIRE

Having recently written to the AIA to ask them for anything on inclined planes and received details back on both The Hay and The Foxton, I was somewhat pleased to realise that our holiday route to Derbyshire would take in the said Foxton!

So, armed with my booklet produced by the Foxton Inclined Plane Trust, we headed for Foxton, in Leicestershire, and came upon a complete area, incorporating the lock flight (which is actually a staircase) and remains of the incline. The lift trail took us round the site in a very logical progression and we were able to see the partially cleared incline and some remains of the working parts, together with the boiler-house (now museum), tipper trucks and an ice-breaker boat. The Trust hopes to develop the area more completely as funds become available.

The following day, now based at Youlgreave, we sallied forth in search of yet more I.A.! This is not difficult in Derbyshire as the county abounds in it! We firstly visited Middleton Top Engine House on (what was) the Cromford and High Peak Railway. (Members of Ray Riley's Worthing classes will remember being shown slides of this!) This comprises a fully restored beam winding engine built in 1829 and is situated at the head of the 708 yard long, 1 in 8 Middleton Incline. It was built to haul wagons up the incline and worked for 134 years. The railway is unusual in that it incorporated no less than 8 inclines! The original idea was for a canal to link the Cromford Canal with the Peak Forest Canal at Whaley Bridge. However, lack of water and numerous engineering difficulties faced the canal designers so it was decided to use the then new railway technology as a more efficient solution to the problem. The line was still constructed

on canal building principles but instead of flights of locks to climb the hills the engineers used steep inclines. After visiting the engine-house and walking down part of the incline we retraced our steps along the "High Peak Trail" as far as the Hopton Tunnel. We then drove round to the Sheep Pasture Incline (idyllic name!) which meets the A6 and then disappears beneath it.

Not content with all that, we then made for the National Tramway Museum at Crich (a long-awaited visit) where we spent the afternoon happily riding on trams, bringing back memories, (yes, we ARE old enough to remember them!) and looking at stationary exhibits. The trams here are all original, having been saved from the scrap-heap by far-sighted enthusiasts, and painstakingly restored by staff and volunteers.

Fairly sated with I.A. we then spent the rest of the week visiting other attractions in Derbyshire, such as the Blue John Cavern and Chatsworth House!

Anyone is more than welcome to borrow the Foxton booklet if they would like to do so.

DIANA DURDEN

BREWERY HISTORY SOCIETY

Members may wish to know of the Brewery History Society founded in 1972 to bring together people with a common interest in the history of brewing, to stimulate research and to encourage the interchange of information. The annual membership fee is £6 and further information may be obtained from The Membership Secretary, Brewery History Society, Manor Side East, Mill Lane, Byfleet, Weybridge, Surrey KT14 7RS.

NEW BOOKS

The following two publications have been drawn to the attention of the Society:

The Art of Gunfounding by Carel de Beer has a preface by Prince Bernhard of the Netherlands, and contains 240 pages with 200 illustrations of which 52 are in colour. The standard edition is £50 and the deluxe edition is £85. Further information from Jean Boudriot Publications, Ashley Lodge, Rotherfield, East Sussex TN6 3QX.

John Wilkinson (1728-1808) Volume I is the first of a new series that will be devoted to the work, life and times of this noted Iron Master of the eighteenth century. Volume I has 60 pages with illustrations and costs £3.95. Further information from Merton Priory Press, PO Box 363, London SW19 3JN.

Also Geoff Mead reports on

English Medieval Industries by J. Blair & N. Ramsay. I have been sent details of a new edition which was due to be published this spring at the price of £45! The handout describes it as a modern successor to the classic work of that eminent Sussex scholar L.F. Salzman, English Industries in the Middle Ages.

Dr Richard Marks, Director of the Royal Pavilion, has a chapter on window glass, a subject on which he lectures with great skill and enthusiasm.

It is published by The Hambledon Press, 102 Gloucester Avenue, London NW1 8HX
ISBN 0 907628 87 7.

SUSSEX MILLS GROUP



Ifield Watermill



Shipley Windmill

The Group have arranged for the production of tea towels with pictures of Sussex Mills on them. Peter Hill organised these and they are being sold at the main mills. The profit will go to the people selling the goods. Sales so far are promising and if we have a second production run there might be some profit for the Mills Group.

The leaflets describing Sussex mills have gone down well but there are not sufficient for next year so we will have to think about some more. I think that they should be a better quality and pre-folded but this will cost money. Your suggestions are welcome.

I have just heard the good news that Vic May has received some form of grant for Barnham Windmill from the EEC. Well done Vic, and perhaps we could have some details for the next Newsletter.

That is all the news from me but there are several letters from others.

DDN COX

HIGH SALVINGTON WINDMILL

I feel that now we have reached the stage when the mill stones are again turning by wind power, our members may be interested to read a few details of the history of progress.

The post mill at High Salvington was built between 1700 and 1720, and worked continuously until 1897. Shortly afterwards, at the turn of the century, the wooden roundhouse was demolished and replaced by a concrete construction which was opened as a tea house, and continued as such until well into the 50's.

Worthing Borough Council purchased the mill in 1959, and engaged E. Hole, millwrights of Burgess Hill to do some emergency repairs. They fitted new side girts, corner posts and breast beams, and certain other timbers in the buck.

It was discovered in 1976 that if the mill was to be saved, substantial sums of money and much work would be needed. High Salvington Mill Trust was inaugurated, and a decision taken to make a complete restoration of the mill. The "Friends of High Salvington" was formed and the committee organised local amateur labour and fund raising activities. The replacement of the crowtree, quarter bars and cross trees was carried out professionally.

The volunteer workers, who had no practical experience in millwrighting, but brought with them their own personal skills, demonstrated to the Council authorities that they were capable of undertaking the complex and arduous task of completing the restoration.

The first major work taking two men two years to complete, was the building of the new clasp arm brake wheel - an exact replica of the old one which was worn eaten and decayed. This was followed by replacing floors, fitting meal beams and tail beam, other timber replacement where necessary, and recladding. New stocks and galls were built and fitted into place, wire machine and corn bins rebuilt, and much more.

This work started in the 70's, is still continuing, and the state is now reached that the machinery has been overhauled and adjusted, the stones are now turning, and it is hoped that the first meal will be produced very shortly.

At this crucial point it came to my notice that the owner of an adjacent house had submitted plans for an additional room which would add more than 6 ft to the height of the roof. The Planning Committee was to meet within a few days. An SOS call was made to the section, and help was forthcoming. A letter was sent from the section, and Vincent Pargetter was able to send me a copy of a document from a Dutch authority (in Dutch) on the effects which can be experienced by windmills when obstacles are introduced into the windflow. With the salient points quickly translated and submitted, a stay of one month was granted, so that the matter could be more fully investigated.

This allowed more time to translate the full paper, and the result of the meeting was that a further stay of two weeks was granted. The house owner then approached us and proposed a compromise in which he would withdraw the plans and re-submit them modified in such a way that the extension would not be any higher than the present roof.

We accepted this as being a reasonable compromise, and feel that it is now unlikely that we will be in a worse position than we were before.

Perhaps the above information could be of interest to any other windmill owners who could find themselves in the same position.

PETER PEARCE

OMBE WATERMILL

With reference to the report in Newsletter No 71 by Peter Pearce, I can throw some light on his comments regarding the machinery. I had contact with Mr Haworth-Booth, the then lessee (in 1975) with respect to items that might be in the mill and the possibility of recovering them in view of the planned flooding of the valley. We obtained permission through him to remove any loose items and this was carried out in April 1976. They were transported to Ifield Watermill for safe keeping and remain there today. The list of main items is as follows:-

Crown wheel, sack hoist (windlass, pulley, framing), bevel gear and shaft (hoist drive), grain chutes (2), grading chute (with eccentric shaft), remains of a wire machine and beam scales (See III).

Some of these items may be reused at Ifield in the near future. The beam scales were donated by Mr Haworth-Booth and I don't know if they were actually originally used at Balcombe.

At the time we were there the main shaft had dropped down into the lower level, at an angle, and may possibly still be there.

E.W. HENBERY

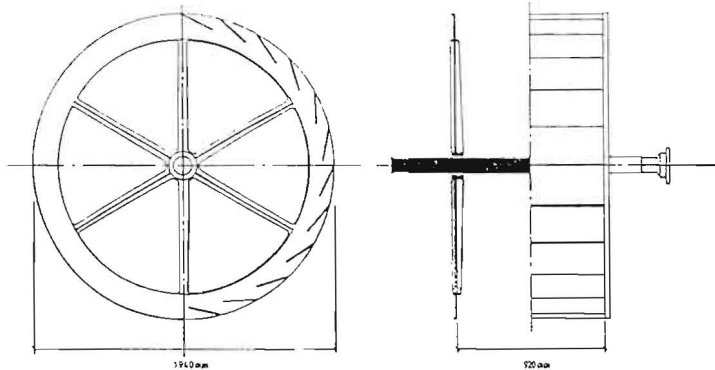
ASHBURNHAM WATERWHEEL, WATER PUMP AND HYDRAULIC RAM

Earlier this summer the waterwheel remains were excavated and removed to the estate workshops where supervised volunteers and staff from Ashburnham Christian Trust are restoring the wheel. After some consultation with the National Rivers Authority, it is hoped to repair the upper dam so as to reinstate the mill pond and supply the waterwheel with water so it can run in the summer months.

Brief description

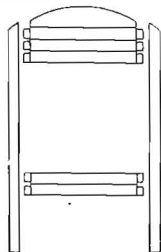
The wheel is made of cast iron mounted with four keys on to a wrought iron shaft. One end of the shaft has a bolted flange plate which is where the now missing pump gear was connected. Originally, the wheel probably had timber buckets but no woodwork exists any longer. When removed, the remains of the fixing bolts suggested the buckets were constructed of 3/4" thick board. The penstock was of a pre-fabricated design mounted on the wall of the dam and supported from the bank on one side and the upright of a sluice gate. This sluice gate was behind the wheel on the middle pond side and was presumably used for washing out the tail race from the middle pond.

TIM MARTIN



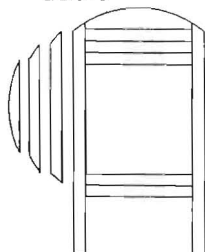
ASHBURNHAM WATERWHEEL

SKETCH 4



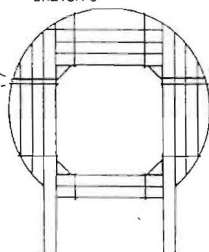
Initial construction

SKETCH 5



side beams added

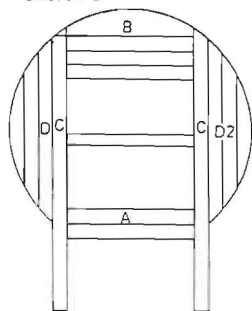
SKETCH 6



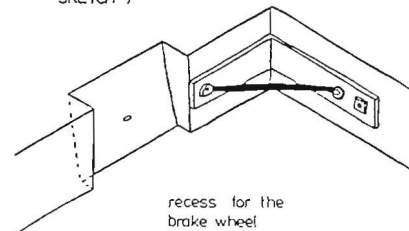
corner brackets and bolts

The two side beams (C) which form the support for the fanstage have mortices cut into them. So, to put this part of the frame together with beams at A and B would have had to have been supported in situ before the side beams were pushed on. It is possible that the tie bolts which pass between the beams at A and B in a recessed groove were used to pull the frame together as these bolts were roughly sawn off at one end (this being on the same side for all the bolts). The heads of these bolts and their washers are neatly recessed in the side of beam D1 and D2 so tightly that the nuts' alignment was critical.

SKETCH 3



SKETCH 7

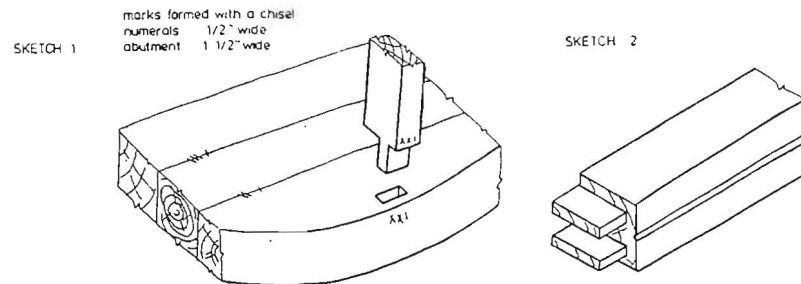


Observations on the Millwrights' Carpentry Marks at Patcham Windmill

The mill was fitted out by Holloways of Shoreham in 1884-1885. The following notes relate to some of my observations on the marks left on the mill's timbers, in some cases from when the mill was being built and in others from when it later underwent repair. The marks found on the timber are of the roman numeral type. The same markings occur on the metalwork with, in addition, some centre punch marking.

The roof

The roof ribs were all tenoned into the cap frame and all individually numbered (see Sketch 1).



Three of the ribs were in the wrong holes and the ribs which were morticed into the front beam, supporting the windshaft, were only marked on the rib and left blank on the beam. Frank Gregory has told me that in the early part of this century this beam was replaced. This is borne out by the method of finishing which shows that different tools and methods were used to fashion this beam. It is also made of a different wood from the rest of the main cap timbers. Other points of difference with this beam are:

1. the size of the clearance holes for the bolts which held the timber baulks together (1/8" (3mm) larger)
2. the type of drill used to recess the rollers under the beam. This has left a series of centre drill and edge cutter impressions in the wood
3. the setting out of radius lines for the rollers and truck wheels is absent.

All the main baulks of timber which make up the cap frame are marked where they abut and numbered (see Sketch 1).

The sequence of original construction

The way the timbers are bolted together indicates the following sequence. It has to be remembered that all-terrain hydraulic cranes were not available to lift the cap on, so it was most likely that this 12 ton cap was originally constructed in situ at the top of the tower. The tail beams (A) and the beams under the neck bearing (B) were all cut with dovetail tenons at each end (Sketch 2 and 4).

Finally, when the cap frame had been finished, the corner brackets were fitted. These were bolted from the outside with the nut on the inner face. These brackets were then amended at the front to accommodate the brake wheel. This was achieved by removing the rivet of the tie rod and redrilling and placing the bolt through at this point. This must have been a great problem to the millwrights who originally constructed it. The clearance hole for the original bolt is in the timbers in the recess for the brake wheel. It must have been quite difficult to drill these holes as some were in excess of 48" long and quite close to the beams at B and A in the corners (see Sketch 6). The holes must have been drilled when the timbers were all together as they are not at right angles to the beams and come out at a different alignment but straight through their bore. It must have been very difficult to auger from the inside where its position was more crucial.

Continued on page 16