



SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY

NEWSLETTER NO. 41

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SERIAC 7th APRIL, 1984

The second conference and exhibition to be mounted by the South East Region Industrial Archaeology Conference will be held this year at the University of Sussex on the 7th April, commencing at 9.45 a.m. The theme will be "The Development of Transport" in the South-East - London, Surrey, Kent, Sussex and Hampshire - and it is intended to illustrate and describe the rivalry and co-ordination between the various different modes of transport within the area.

After introduction by the Chairman Dr. Neil Cossons, lectures will be given on 'Sea Coastal Trade' - speakers from the Dolphin Sailing Barge Museum Trust; 'Sussex Turnpikes', Dr. Brian Austen; 'London's Lost Route to the Sea', Peter Berrisford; 'A Victorian Steam Railway in South Eastern England', Dr. Edwin Course; and 'The Role of Croydon Airport in the Development of British Civil Aviation', Douglas Cluett.

The Conference, which is being hosted by the SIAS together with the University of Sussex Centre for Continuing Education, will be held in the Lecture Theatre PBIA7 of the Physics 1 Building, lunch will be in the Refectory Building. Place and lunch reservations should be made not later than Monday 26th March, 1984. Registration fee for the Conference is £4, which includes morning coffee and afternoon tea. Lunch is £2.60 per head. Cheques (crossed and made payable to the University of Sussex) should be sent to the Administrative Officer, Centre for Continuing Education, Education Development Building, University of Sussex, Falmer, Brighton, BN1 9RG. Tel: Brighton 606755 ext. 866.

Anyone wishing to mount a display as part of the exhibition should contact the Conference Manager, Gordon Thomerson, 42 Gander Hill, Haywards Heath, West Sussex. Tel: Haywards Heath 450722 by 1st March 1984.

PLEASE NOTE THAT THE LATEST DATE FOR ACCEPTANCE
OF COPY FOR THE APRIL NEWSLETTER IS
WEDNESDAY 14th MARCH

GENERAL SECRETARY'S REPORT - 1982/3

When I look back over last year's Report I realise how similar it is to this year's. This I suppose is inevitable. A Society such as ours tends to be static and changes or developments are gradual.

The Society has maintained a steady level of activity. Membership is now 254 an increase of 5 on the numbers at the same time last year.

During the year we have had one significant change. Eric Taylor who has been Editor of the Newsletter and Sussex Industrial History since 1976, relinquished his duties in April. The thanks of the Society are due to him for his many years of devoted service.

Work undertaken by the Society. The work at the water pump at Coultershaw is now virtually complete, electricity has now been connected and a new sluice fitted. There have been an encouraging number of visitors throughout the season.

Works being undertaken by members in association with other Societies. At Clayton, Jill has had the west side weatherboarded, a new steel stock has been fitted and four sweeps are now fitted. Work on the fantail frame is nearing completion. Jack, which was struck by lightning in May has now had the damaged stock and sail replaced.

At Ifield Mill work is in progress on the control mechanism for the launder. A car park has been constructed by Crawley District Council.

At West Blatchington Mill, the cap has been replaced and stocks and sail frame refitted. Hove Corporation have reroofed the adjoining barn and interior renovation is proceeding.

At Oldlands Mill, the structure has been raised on framing pending future restoration. The stones have been lowered into the roundhouse.

At Polegate Mill, the external gallery is nearing completion, this work is being carried out by Eastbourne Y.M.C.A. as part of a training scheme.

At High Salvington Mill, weatherboarding to sides and roof has been renewed and the tail pole refitted. Work to the interior fitting is proceeding.

Research The strength of our Society is in the enthusiasm of individual members. Many of us are actively engaged in research but this is often a long-term process and the time required to produce a publishable document is often lengthy. Nevertheless I would earnestly request all members who are doing any investigatory work to try their utmost to get their work published. If this is not possible I would request that members let their research material be placed in the Society's archives. The Brick Study Group, now under the Chairmanship of John Haselfoot, continues its work, but there are still areas of the Counties which have not been adequately covered.

Record of I.A. Sites A project to record all I.A. sites in the two Counties is under way and assistance is required. Members are required to cover special topics as well as for detailed investigation of specific areas. This project is being co-ordinated by Peter Holtham and myself. Concurrently with this and supplementary to it is the need to prepare detailed surveys of I.A. sites. During the past year a team from this Society and from Brighton and Hove Archaeological Society together with Lewes Archaeological Group under the leadership of Ted O'Shea have been recording the remains of the Bishopstone Tidemills and there are other

projects of a similar nature to be done, as well as surveys of individual buildings of which the Casual Ward at the Uckfield Workhouse, Beard's Brewery in Lewes, the old Candle Factory in Lewes and the various Ice Houses are examples.

Field Guide I was a bit premature in my Report last year. The editing process has been proceeding over the past year and the photographic material is being assembled.

SERIAC The Conference which was held in April this year at Surrey University was a great success. About 150 people attended and heard many lectures on the subject of "Water in the South East". Next year the Conference is being organised by our Society on the subject of "The Development of Transport" and is being held at the University of Sussex on Saturday, 7th April.

Programme There has been a very complete programme of visits and meetings throughout the year. There has been a visit to various bridges in West Sussex, a talk and walkabout in Lewes, a talk and visit at the Chalk Pits Museum and a tour of mills in Mid Sussex. We have had a joint meeting with the East Kent Mills Group on the subject of Windmill Restoration. A meeting held in Anne of Cleves House with contributions from our own members was well attended but the working party at the Chalk Pits Museum attracted few members. Our thanks are due to Don Cox for the excellent organisation of these events.

The Committee has tried to maintain a level of activity in various fields suited to our size and status. You may feel that we are not doing enough in certain directions, if so please let the Committee know so that we can consider your suggestions. The Society consists of its members and the direction in which the Society moves in the future is up to you.

Ron Martin.

SPREADING THE WORD ABOUT INDUSTRIAL ARCHAEOLOGY

The Society has recently been approached concerning the running of a course of talks on Industrial Archaeology. In order to be prepared and perhaps to offer our services to organisations such as the W.E.A. I have offered to organise/co-ordinated this activity. So would all members who have some slides of I.A. in Sussex and are willing to give one or more talks please contact me.

I know that some members already give talks on particular aspects of I.A. so let me know your subject and how far you would be prepared to travel. I would expect that travel expenses (car allowance) would be paid.

To be able to offer a coherent series, as well as individual talks I suggest the following as topics for a course. These could of course be adapted to suit the particular expertise of those that volunteer.

- | | |
|---|---------------------------------|
| 1. Introduction to Industrial Archaeology | 2. The Industrial Revolution. |
| 3. Wind and Water Power. | 4. Water Transport and Canals. |
| 5. The Railway System. | 6. Roads and Road Transport. |
| 7. Brick, Iron and Glass Industries. | 8. Other and Modern Industries. |
| 9. The Museums. | 10. An I.A. Project. |

These are my ideas; let me know yours.

Don Cox.

TREASURER'S REPORT

This has been a difficult year for your Society with costs increased over last year under almost every heading and our income from the sale of our literature down. On the other hand our subscription income shows a modest increase, reflecting the slow but steady growth of the Society; we had 18 new members last year as against 21 the year before. Increased membership is certainly the key to our prosperity.

An important item in the accounts is the balance in our General Fund, which carries all our operating costs, except those incurred on specific restoration or recording projects. This has fallen from £430 a year ago to £267. We are still awaiting some £48 from the Inland Revenue for rebated tax under covenants but this figure is not sufficient for the Society's needs and very regretfully your Committee has decided that the subscription must be increased.

I am encouraged to see that my predecessor in the course of his Report to the Annual General Meeting in 1977, when the subscription was increased from £2 to £3 said "I wonder whether this increase will only mean a further next year." In fact the subscription has been maintained at £3 for six years which says something for the care taken by your Officers to contain their costs. The suggested increase to £5 compares with an increase in the Retail Price Index of 66% over the period.

Subject to your approval the Individual Subscription will increase to £5 from 1st April 1984, with corresponding increases for Life, Family and Junior Membership. It is hoped that as many members as possible will agree to give Standing Orders to their Banks and complete Covenants so that Income Tax can be recovered. This is an important source of income to the Society at absolutely no extra cost to the member and I would stress for the benefit of anyone considering a Covenant that should they leave the Society their obligation would be cancelled.

Finally, I have to tell you that there are still 12 unpaid subscriptions, due 1st April 1983, and I hope that any member whose conscience is troubling him will contact me.

The accounts have been audited and I would like to express the appreciation of the Committee and myself to our Honorary Auditor, Mr. Michael Tighe, who has again carried out for us this quite onerous task.

Michael Bevan.

BRICK STUDY GROUP RECORD SHEET

Please use A4 paper and at the top attach a coloured photograph, rubbing or drawing of the impressed maker's name or mark of a stamped tile or frog marked brick. Below this insert the following information:

Dimensions:

Colour and texture:

Where found:

Where made:

Details of maker:

A meeting of the Group was held in Ditchling on 5th November. Seven members only attended but reports sent to the Secretary during the year had been both numerous and wide-ranging. They included: references to brickmakers in the Hillman Mss. in the East Sussex County Record Office (P. & J. Holtham), brickmakers in Ashurst (M.J. Leppard), brickworks in Goring, East Preston, Poling, Rustington and Littlehampton (R.M. Palmer) and copies of O.S. maps and notes on brickworks in the Chichester/Selsey area and other brickworks adjacent to railway lines, encountered by J.C.V. Mitchell in the course of research for his 'Branch Lines' series of books. In addition Mr. C.F. Tebbutt had drawn our attention to the excavation at Camber Castle which had revealed large quantities of Tudor bricks and Dr. T. Hudson had kindly supplied a map of West Sussex parishes to help with the classification of our growing volume of records.

Of those present, Mr. E. O'Shea reported finding gault bricks measuring 9in.x4½in.x4½in. in the course of his excavations at Bishopstone Tidemills and he informed the meeting that the Hastings Brickworks at Guestling had been taken over by the Milton Hall Co., who would continue to make 'specials', including mathematical tiles, to order. Mrs. M. Holt had been noting details of local brickmakers from 19th Century census returns for villages in mid-Sussex and she thought that the Roman tile-kiln at "Danny", found some time ago, might be re-excavated for purposes of comparison with the one at Hartfield, where excavation had continued this summer. Mr. R. Martin had completed his scrutiny of the trades' directories in Brighton Library and Mrs. M. Beswick had done some work on the history of brickmaking in the Robertsbridge and Eastbourne areas and in both cases had received useful information from the local historical and archaeological societies. The Robertsbridge Field Study Group in particular had done some detailed recording of brickmaking sited in the parish of Ewhurst.

Several members reported finding interesting specimens of brickwork, but it was decided that this subject did not really come within the scope of the Brick Study Group, which was concerned principally with the manufacture of bricks and tiles. In this connection Mr. R. Martin stated that the records of mathematical tiles which he had compiled would not form part of our archive, but would be lodged eventually at the Weald and Downland Museum.

Mr. J. Haselfoot had been concerned during the year with arranging the brick-making exhibit at the Chalkpits Museum, Amberley. This includes a sizeable collection of frog-marked bricks, of which he had made drawings, and some tiles bearing a maker's stamp, which he had photographed. Another possible method of recording stamped tiles had been tried out by Sir Frederick Sowrey, who had made 'rubblings' with heel-ball. This produced good results with a raised mark, but was less satisfactory with an impressed mark. After some discussion, it was decided that a record of brick and tile marks used by Sussex manufacturers should be compiled, that a coloured photograph of each mark would be the best record, but that any method of recording was better than none and that rubbings or drawings provided possible alternatives. A specimen record sheet was produced (see example) and members were requested to keep an eye open for marked bricks and tiles and to send details to the Secretary.

It is hoped that future activities of the Group will include surveys of the disused brickyards at Berwick and Southwater. In the meantime any offers of help with local research and field work will be appreciated.

M. Beswick

In his article on the Volk's Electric Railway Centenary in the Newsletter of July 1983, Mr. J.S.F. Blackwell mentioned in a footnote that he had not been able to locate the Siemen's dynamo which he thought had been presented to the Brighton Technical College many years ago by Magnus Volk. I am delighted to be able to report that the machine is still very much extant in the Electrical Machines Laboratory of the Department of Electrical and Electronic Engineering in Brighton Polytechnic. I am especially delighted because for so many years now I have carefully protected the machine and even have had it refurbished as I thought it an important part of electrical engineering history. In the field of electrical engineering, technology is advancing at a tremendous pace and holding on to antiquities is seen as a retrograde step by so many. I feel that Brighton and Brightonians have contributed so much to electrical history that we should safeguard the Town's heritage in this field whenever we can. Whilst I have not had the time to make a detailed study of the history of the machine, readers may be interested in the following notes.

By 1874 Mr. Magnus Volk was recognised as one of the handful of enthusiasts in the electrical engineering industry in England. In that same year, he became acquainted with Mr. William Jago, a science master at the Brighton College of Science and Art, and very soon he was assisting Mr. Jago in public lectures and demonstrations pertaining to developments in electrical technology. In the course of these, Mr. Volk had seen a slide of a dynamo made by Siemens Brothers and he decided to obtain one and drive it by means of a gas engine in order to provide his Preston Road house with the newly introduced incandescent filament electric lamps. Much co-operation was given him by Alexander Siemens, the Manager of the Woolwich factory of Siemens Brothers, and Mr. Volk purchased a D5 dynamo in 1880.

When he moved to 17 Gloucester Place the following year, he had no need for a private generator as the house was supplied with electricity through the Hammond Electric Light Co. Thus, when Magnus developed his electric tramway and was thinking of a machine to generate the electric power, he had one readily available. At 50V and 46A D.C., the machine could only just about supply the one small car on the original experimental section opened in 1883, so when this was extended he bought a new Siemen's D2 generator (approximately 40A at 160V). The old D5 generator was given to Mr. William Jago for "educational purposes".

Dr. Edward Hughes, the Head of the Electrical Department of the Brighton Technical College, rediscovered the machine among various relics in a room at the College. He confirmed with Siemens Brothers that it was the original generator bought by Mr. Volk and it was kept by him as a historic exhibit. I joined the Brighton Technical College in 1958 and have stayed with the College (and the dynamo) as the former progressively changed its name and premises over the years. Some years ago I had the machine stripped, cleaned and refurbished and I even had a final year student do a design study on it in 1978.

Obviously the machine has had modifications made over the years. When built it would have had brushes made from a flexible collection of copper wires looking like a miniature birch besom - hence giving the name "brush". Carbon brushes are fitted on the machine now, these were not introduced until about 1885. (It is interesting to realise why the name "brush" still applies to the piece of hard carbon which replaced the "brush" of copper wires.)

The machine is still in working order and can be run either as a generator or a motor. The student's design study of 1978 highlighted that most of the conductors of electrical machines of the period were working purely intuitively until people like Professor John Hopkinson in 1886 began to treat design on a theoretical basis. Thus the D5 generator works at very low flux density levels compared with modern machines and struggled to achieve a 65% overall efficiency compared with the 75% - 80% of today's generators.

Nevertheless, I am sure that Magnus Volk would have been delighted that his generator donated in 1884 for educational purposes was still being used almost 100 years later.

D. E. S. Hill. Brighton Polytechnic

DETAILS OF THE CONSTRUCTION OF THE BRIGHTON CHAIN PIER

"The entrance is by a beautiful esplanade, 1,250ft. in length, and 33ft. in breadth. The Pier runs out into the sea upwards of 350 yards. The foundation consists of four clumps of piles, driven 10ft. into the solid rock, and rising 14ft. above high-water mark. The three first clumps of 70 piles each; the fourth, which is in the form of a T, has 150 perpendicular and diagonal piles, strongly bound by framings and wale pieces in various places. At the top of this fourth clump is a platform 80ft. long, paved with 200 tons of Purbeck stone; and beneath are galleries and flights of steps for the convenience of embarkation and debarkation. The groups of piles are 250ft. apart, and over each rises a pyramidal tower of cast iron, 25ft. high, formed by two side towers united to an arch at the top. Over the top of each tower pass the main suspension chains, which issue from the body of the cliff (the Marine Parade), into which they are carried 54ft., and are fastened to an iron plate weighing nearly three tons, and, thus secured, the excavations are filled up with stone and brick work. These chains, after passing over the towers to the outer extremity of the Pier, diverge from the last tower in an angle of about 87 degrees, and are at the ends embedded in the solid rock; where they are properly secured by bolts and keys, with the additional security of the whole weight of the platform before mentioned. Of these chains there are four on each side, composed of 170 links, each link being 10ft. long, 6 $\frac{1}{4}$ in. in circumference, and weighing 1 cwt. The Pier is 1,134ft. long, 13ft. wide, with a neat cast iron railing on each side, supported by curlines or cross-timbers resting on two bars of iron, which extend the whole length of the Pier, and are upheld by suspension rods, which are of different lengths, and are 362 in number."

It may be added that the wood used for the piles was Norway fir, which was thickly pitched; the piles were pointed with metal for the better penetration of the rock into which they were driven, and for some distance upward to the water-mark they were studded with brass nails, to prevent the adhesion of barnacles (concha antiifera), by their being poisoned by the verdigris. The pile drivers, when the Pier was being constructed, were not paid by the day, but received 25s. per pile.

The Chain Pier opened in 1823 and was destroyed in a storm on the night of December 4th 1896.

Extracted from "The Brighton Chain Pier: In Memoriam" by J. G. Bishop.

J. S. F. Blackwell

WEALDEN IRON RESEARCH GROUP

The Winter Meeting of the Wealden Iron Research Group will be held at 2.30 p.m. on Saturday 4th February 1984 at the King Edward VII Institute, Groombridge (TQ 53153730). The Hall is situated in the middle of the village opposite the Post Office.

A talk will be given by Mr. E.B. Teesdale (a WIRG member), about "Ralph Hogge: Queen's Gunstonemaker of Iron". Tea and cakes will be served after the talk at a cost of 50p per person.

The 1984 Annual General Meeting will be held on Saturday 14th July 1984 in Battle. There will be two talks in the morning, one by Dr.G. Brodribb and the other by Mr.B. Funnell. In the afternoon there will be a visit to Beauport Park. For further details please contact the Hon. Secretary, Hamfields, Withyham, Hartfield, Sussex. TN7 4BH.

COUNCIL FOR KENTISH ARCHAEOLOGY

The C. K. A. are holding a special one day Conference of illustrated lectures covering aspects of transportation, its history and preservation, in the Medway-Swale areas together with visits to local sites of historic interest. The Conference will be held at the Town Hall Chatham on Saturday 17th March 1984 commencing at 11 a.m. until 5.30 p.m.

There will be a choice of guided tours: General tour of Chatham Dockyard: The Ropery and Museum, Chatham Dockyard: Medway Heritage Centre and Brook Pumping Station: Fort Amherst: these take place in the morning. In the afternoon there will be a series of illustrated lectures: Chatham Dockyard and its History, Keith Slade: Aircraft Preservation, Lewis Deal: Railway Preservation and the Sittingbourne Light Railway, Robert Ratcliffe. There will also be bookstalls, displays and light refreshments. Tickets are: Full day £1.50: Half day £1: payable to C.K.A. 5, Harvest Bank Road, West Wickham, Kent. Please send SAE.

PUBLICATIONS

Two new books co-authored by member Vic Mitchell and published by his Middleton Press have been released during the last few weeks.

Midhurst Town - Then and Now

The charming county town of Midhurst has been little affected by the passage of time, and this album fully portrays its unique attraction with numerous illustrations from the past, together with a few from the present for comparison. There are features on the railway stations, the gasworks and North Mill.

South Coast Railways - Worthing to Chichester

One of the most significant chapters in local history is fully illustrated in it with detailed maps of every intermediate station. The wharves of Littlehampton and the day-tripper's specials are just some of the subjects pictured amongst the everyday railway scenes, past and present.

Both books are similar in presentation to the BRANCH LINE series, each having 96 pages and 120 photographs. All titles are priced at £5.95 and are available post free to members from Middleton Press, Easebourne Lane, Midhurst, Sussex. GU29 9AZ.

Programme of Visits for 1984.

18th March, Sunday 2.30 p.m.

Visit to Brighton Railway Works.

Meet at Highcroft Villas, Brighton. (TQ 302060)

This Group of people are dedicated to the restoration and preservation of artifacts of Southern and Brighton Railway associations. Early days but do come and see what they are doing.

7th April, Saturday

South East Region Industrial Archaeology Conference on The Development of Transport. The University of Sussex, Falmer. See details elsewhere in this Newsletter.

28th April, Saturday 2.30 p.m.

Visit to Poyntz Bridge - Old and New Sites, plus Chichester Canal.

Meet at Chichester Canal Basin. (SU 859042). Parking nearby in Terminus Road. This is the latest project under the wing of Alan Allnutt. It is well worth a visit so do come and if you are keen we can have a look at the Chichester Canal along its length as far as the new Yacht Basin.

19th May, Saturday 10.30 a.m.

Frank's Mystery Tour of Mills.

Meet at Argos Mill, Mayfield (TQ 570283) Parking will be difficult - Please take care. Frank Gregory has again been persuaded to lead us on a tour of mills. This year to the east of the centre of Sussex. Please come and join us.

23rd June, Saturday 7.00 p.m.

Members' Evening at West Blatchington Windmill, Hove. (TQ 278063)

After the successful evening last year (did you come?) we are trying a new venue which easy to get to. Please come together with your "other half". Plenty of coffee, tea and biscuits. Members willing to give a 10 minute talk on their particular interest please contact D. H. Cox, 3, Middle Road, Partridge Green, Horsham, RH13 6BQ.

If you are coming please let Don know, it is essential to know the numbers for the refreshments.

14th July, Saturday 10.30 a.m.

All day visit to Shoreham Harbour.

Meet at The Marlipins Museum, High Street, Shoreham. (TQ 215050)

Still in the planning stage at the time of writing, so any and all help will be appreciated, i.e. any specialist knowledge of the harbour and its history. Bring sandwiches and come along and have a pleasant day exploring the area. See next Newsletter for more details.

I know that transport for the visits can be difficult for some people, if so, please let me know and I will try to put you in contact with a member with a car.

Don Cox

FROM THE CHALK PITS MUSEUM, AMBERLEY, TO THE MEMBERS OF OUR SOCIETY.

Julie and I would like to thank you, on behalf of the Trustees, for the help that you have given with our services to the visitors during the 1983 season.

Time and time again I have received comments, both verbal and written about the friendly, helpful atmosphere at the Chalk Pits and the role played by the voluntary staff, whether selling tickets, souvenirs, or refreshments plays a large part in that valuable image.

I hope that we can count on your support in 1984. There will be a coffee morning at 11 a.m. on Saturday, 17th March in the tea room to discuss the new developments and arrange the rota.

Once again our sincere thanks for your assistance. Ian Dean, Director.

MEMBERSHIP CHANGES

New Members

N.V. Martin, 6 Sompting Lodge, Sompting Road, Lancing West Sussex. BN15 9LB
(Work: Lancing 764359 Home: 765696)

Stephen Penny, 28 Wykeham Way, Burgess Hill, West Sussex. RH15 0HF
(Burgess Hill 6189)

Change of Address

M. Brunnarius, Apollo Cottage, 22 High Street, Hurstpierpoint, Hassocks, BN6 9TY
J.K. Stephens, B.H.C. Malta, Foreign & Commonwealth Office, King Charles St. London SW1

OFFICERS

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D.H. Cox	F.W. Gregory
A.J. Haselfoot	E.W. Henbery
P.J. Holtham	E.W. O'Shea
R.M. Palmer	G.G. Thomerson