



SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY

No.30.

APRIL 1981

CHIEF CONTENTS

Essay Competition Result

Brick Study Group - Report for 1980

Mrs. M. Beswick

Carter Bros. of Billingshurst

A.G. Allnutt.

ESSAY COMPETITION

Five entries were received, all from pupils at independent schools, three being from St. Leonards-Mayfield Girls School at Mayfield, and one each from Ancaster House Girls School at Bexhill and William Parker Boys School at Hastings.

The essays were all of a very good standard; the panel of Judges thoroughly enjoyed reading them and congratulate all the authors on their efforts.

Selecting the Prize Winner was difficult but the panel finally came to a unanimous decision to award the Prize to Simon Kamer and John Bell of the William Parker School for their joint essay on 'Iron Working in Westfield'. Their essay showed personal involvement, some original thinking and a good broad approach.

The other essays submitted were, in alphabetical order of the authors' surnames:

'Tile-making in Sussex' by Mary-Claire Elmsly of St. Leonards-Mayfield School.

'Methods Employed in the Production of Iron within the Sussex Weald'

by Tracy Parsons of St. Leonards-Mayfield School.

'The Development of the Iron Industry in Sussex as related to Gun Founding'.

by Virginia Peace of St. Leonards-Mayfield School.

'A Sussex Mill' by Suzanne Whitmore of Ancaster House School.

The high standard of the Essays and the work done in their preparation has encouraged the Society to repeat the scheme in 1981/2, the final submission date for the Essays being 31st January 1982.

HAVE YOU PAID YOUR 1981 SUBSCRIPTION DUE ON APRIL 1st.

If not, please let the Treasurer have it NOW and save him the trouble and EXPENSE of having to send out reminders.

Full Member	£3.00	Junior Member (under 18)	75p.
Family Member	£1.50	Full-time Student	75p.

It would be a great help to the Treasurer, as well as a convenience to yourself, if you would use a Bankers Order (obtainable from the Treasurer, Mr. J.M.H. Bevan, 12, Charmandean Road, Worthing).

(Tel: Worthing 35421)

GENERAL NOTES AND NEWS

The Chandler Slide Collection Miss Netta Ellis, on behalf of the Society of Sussex Downsmen, has presented to our Society the Chandler Collection of fifty 35mm glass slides showing many Sussex wind and water mills in the early 1930's. The collection includes several early colour transparencies but the majority are black and white in the form of 25mm positive strips mounted in glass for projection.

The Downsmen are pleased to learn that the slides will be deposited with other S.I.A.S. records at the Hove Reference Library. M.Br.

Electrical Exhibition at Worthing Work is proceeding on the organising of the exhibition at Worthing to mark the 80th Anniversary of the inauguration of an electricity supply in the town (21st September 1901). Mr. A.G. Allnutt is arranging a stand for the Society and would welcome offers of help or the loan of relevant photographs or artefacts.

Overhead-line Insulators One of our Members, Dr. M.I. Pope, is, and has been for about thirty years, assembling data for a book on the history and development of overhead-line insulators with particular reference to the telecommunications field. He would be pleased if any Member who has information, samples or knowledge of the location of early specimens of telegraph, telephone or electricity-supply insulators would be good enough to get in touch with him.

The South-East area is of special interest in this connection as both Portsmouth and Brighton operated their own telephone systems for a short period in collaboration with the National Telephone Co. Some of the insulators then used can still be found attached to old buildings.

Dr. Pope's address is 34 The Avenue, Hambrook, Chichester (Tel: Bosham 573676) or he can be contacted at the Department of Chemistry, Portsmouth Polytechnic.

Jack and Jill Windmills The west side of Jill has been clad with new weather-boarding and work is now commencing on laying the new floor-boarding on all floors including the round-house. A thorough inspection has revealed that the breast beam, which is situated across the front of the mill and rests at each end on the corner posts, has at some stage been filled with cement thus trapping water and causing further decay. As this beam carries the windshaft attached to which are the sweeps and stone driving wheels, it must be replaced. Work will then continue on recladding the remainder of the mill. A Country Fair in aid of the restoration fund is mentioned in the Forthcoming Programme. J.S.F.B.

PLEASE NOTE THAT THE LATEST DATE FOR THE ACCEPTANCE OF COPY FOR THE JULY NEWSLETTER IS 8th JUNE.
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FORTHCOMING PROGRAMME

All on Saturdays

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|----------------|-------|---|
| 25th April | 2.30. | The Engineerium, Neville Road, Hove. MR245364. |
| 16th May | 2.30. | Remains of Battle Gunpowder Works. Meet at Peppering Eye Farm, approx. 1½ miles SW of Battle. MR744139. |
| 13th June | 10.30 | Mystery Tour of Sussex Mills. Start at Outwood Mill approx. 3 miles NE of Horley. MR327455. |
| 25th July | | ALL DAY VISIT TO SOUTHAMPTON. PLEASE NOTE CHANGE OF DATE. An extra visit has been arranged for that day, so the programme will now be: |
| | 10.30 | Meet at Eling Tide Mill, Eling Hill, Totton, for a conducted tour of the mill. Local corn is ground there and is sold to the public. After a break for lunch (there are 3 pubs in Eling that all serve food) we shall move into Southampton itself for: |
| | 2.00 | Visit to the Tram Restoration Centre (A map of the location of the centre is available from me beforehand for those attending the morning visit). |
| | 4.00 | approx. Visit to Twyford Pumping Station to see the station and the restoration work being carried out there. |
| 5th September | 10.30 | Working Visit to Chalk Pits Museum, Amberley. Meet in car park at entrance. |
| 12th September | | Country Fair at Clayton Parish Green (at the foot of Clayton Hill) in aid of restoration fund for Jack and Jill Windmills. All the fun of the fair, country crafts, arena events and minibus trips to view work at Jack and Jill. |
| 26th September | 3.00 | Talk on "The Early Days of Electricity Supply", by Mr. Bob Gordon, Curator of the Milne Museum (SEEBOARD). This is part of the Exhibition being held at Worthing Library from 21st September to 3rd October and at Worthing Museum from 21st September to 31st October, to commemorate the 80th anniversary of the electrification of Worthing. The talk will be in the well equipped lecture theatre of Worthing Library (in the basement) and will be open to the general public. There is a car park just behind the Library/Museum/Town Hall complex and if you decide to visit the exhibition as well thus making a day of it, The Wheatsheaf next to the library, does a good line in ploughmans lunches. |

To help in planning the visits, Members are requested to let the Visits Secretary, Mr. D.H. Cox, know if they intend to take part.
(Address and phone nos. on last page).

This report was unavoidably held over from the January Newsletter, due to pressure on space.

The meeting of the Group held on 29th November, was attended by eleven members, most of whom had been active during the past year in various kinds of field work and recording.

The Chairman, Mr. O'Shea, reported on the dismantling and reconstruction of the kiln at Piddinghoe. Work was progressing steadily but, due to a number of different factors, it was about 8 weeks behind schedule. Additional volunteers to help with the final stages of rebuilding would be very welcome indeed (no previous experience needed - ring Lewes 2393). A Society member, Mr. Osborne, has discovered that he is related to the Baker family, who were brickmakers at Piddinghoe throughout the 19th century and has done some work on tracing their history. Work has continued in the Brighton area on locating and documenting the brickworks which supplied early building materials for the town. Mr. Martin reported that builders' accounts were proving particularly valuable in this respect. Mr. Blackwell has made a tape-recording of conversations with a retired builder. A Sussex University C.C.E. course in Brighton attended by Mr. Roberts, is studying the History of Plumpton, a parish where the brickfields provided an important source of local employment. Remains of brickworks in the Horsham area have been recorded by Mrs. Holt at Lower Beeding, Leonardslea and Henfield and former brickyard sites have been inspected by Mr. Cox at Partridge Green, West Grinstead and Shipley. Former brickworks in Battle and the surrounding villages, as well as others in the Rye and Bexhill areas, having been recorded by Mr. Upton, and Mr. Haselfoot has continued work in and around Hastings. Mrs. Beswick reported that her research on the Ashburnham and other estate papers in the East Sussex Record Office had yielded information about brickmakers in several parishes, including Mountfield, Ninfield, Hooe, Wartling and Herstmonceux and more was learnt about Crowhurst Pottery as a result of a visit made to inspect a brick bridge in that parish. Maps and an outline history of brickmaking in the Eastbourne area, which had been assembled for an exhibition at the Winter Garden last April, were displayed for members to see. In addition, the Secretary had received details about individual brickyards in Bolney from Mr. Evans and on Ashdown Forest from Mr. Tebbutt, who has gathered some useful information from the grandson of the last brickmaker on the de la Warr estate brickyard at Chuck Hatch.

Districts from which little has so far been reported include Chichester, Arundel, Petworth, Pulborough and Crawley and volunteer recorders for these areas would be very welcome. In view of the amount of material now being gathered, members were reminded of the procedure for recording, set out in the leaflet previously distributed. The Secretary stressed the need for findings to be put in writing and a copy sent to her. Finances permitting, it is hoped that this material will eventually be put together in a form similar to the Bedfordshire publication 'Brickmaking: a History and Gazetteer'.

The survey of the distribution of Mathematical tiles was reported on by Mr. Martin who has so far collected details of over 300 buildings in Sussex. The record of his findings was displayed for members to see. Neither he, nor Mr. O'Shea who has noted over 50 buildings in Lewes alone, has yet found any evidence to indicate which tileworks made these particular products. Mr. Alex Clifton-Taylor is including Lewes in his next series of television programmes 'Six English Towns' to be screened in Spring 1981.

The attention of members was drawn to the need to take geology into consideration when noting the details of brickworks and their products. Mr. Beswick explained that variations in sources of brick and tile-making material were bound to occur in view of the diversity of tile clay and brick loam from different sites in the Wealden area and found that the former (Wadhurst clay) contained less than 25% silica, whereas the latter (usually Ashdown Sand) contained over 75% silica on average.

An attempt is being made to compile a bibliography of Sussex brickmaking. The Secretary produced lists of material which had appeared in S.I.A.S. publications to date, and material published elsewhere. Members of the Group were asked to let her know about any other material which should be included.

A lighter note was introduced by a 19th century poem, a copy of which had been sent by Dr. Hudson. It told of the conflict which arose in Worthing between an influential resident and a local brickmaker on account of the foul smells emanating from his kiln.

The meeting concluded with a short film made at the penultimate firing at Ashburnham Brickyard, shown by Mr. Upton, whose admirable photographic record of the dismantling of the Piddinghoe kiln was displayed at the Society A.G.M. in the afternoon. Also on display were two very fine watercolours of the Hastings Brickworks, Guestling presented to the Secretary by the artist, Mr. Strickland, who is a member of S.I.A.S.

PUBLICATIONS

Sussex River, Journeys along the banks of the River Ouse, by Edna & Mac McCarthy.
Part I Seaford to Newhaven, 54pp; 60p. Part II Newhaven to Lewes, 68pp; £1.00.
Part III Upstream from Lewes to the sources, 76pp; £1.50.

Although intended for the general reader, these booklets have much of interest to the Industrial Archaeologist as the areas described are rich in I.A. sites and remains. The Bishopstone Tidemill site east of Newhaven is particularly evocatively described. The port of Newhaven was dependent on boat building at Denton, commercial traffic of lime from pits and kilns near the banks of the Ouse and bricks and tiles from Piddinghoe until the arrival of the railway from Lewes in 1847. The L.B.S.C. Railway, developed the harbour as a cross-channel centre and erected marine engineering workshops. Cement works were built along the valley and connected to the railway system for the deliveries of coke and distribution of the finished product.

Lewes with its industrial heart now ripped out still has warehouses and Harvey's Brewery. Above Lewes the river was canalised under the Upper Ouse Navigation Act of 1790 and although never profitable, the remains of many of the locks can still be seen and also, the course of the 1 in 2 tramway from Offham chalkpit (to the rear of the Chalk Pit Inn) under the turnpike road to a wharf on a cut from the river. Many watermill sites and remains are described and were used for such purposes as corn grinding, paper making, fulling and iron working. There are one or two surprising omissions such as the industrial sites at Glynde and the abandoned Ouse Valley Railway whose remains crop up at several points near the river to the north of Lewes but I found the booklets well produced with helpful maps and diagrams which should stimulate the reader "to go out and look for themselves" by foot or car. A complaint I have is the complete lack of source references. The booklets should be available from local bookshops but I found difficulty in locating Part III until a visit to the Seven Sisters Country Park at Exceat where all three parts are on sale.

J.S.F.B.

Victoria County History of Sussex, Oxford University Press £48. A milestone in Sussex history is marked with the publication nearly thirty years after its predecessor of another volume of the Victoria County History of Sussex.

Six volumes about Sussex were published between 1905 and 1953 but then lack of funds prevented any further work being done until 1973. Dr. Tim Hudson, one of our Members and now the Sussex editor, was appointed to resume the history based at the County Record Office in Chichester.

The Sussex History is being financed by the University of London with help from West Sussex County Council. It is part of a national survey, started in 1899, of which 180 volumes have so far been published and which will eventually include the history of every town and village in England.

This latest volume covers Worthing, Shoreham, Steyning and 16 neighbouring parishes. The centrepiece is Worthing - its history chiefly written by Tony Rowland of the central Victoria County History staff, is the most detailed ever written of the town.

Beginning as a medieval fishing hamlet with a chapel and a small harbour, Worthing began to grow very fast in the early 19th century as a seaside resort imitating Brighton, though on a more subdued scale. During the 19th century it was held back by sanitary problems, but it later grew rapidly again to become the second largest town in Sussex. Its changing fortunes are fully chronicled and among the many subjects covered is the town's other former claim to national fame, its market-gardening industry which flourished on the fertile coastal plain.

The histories of three other towns appear in the volume. That of Shoreham is written by Christopher Elrington, general editor of the Victoria County History, and charts the progress of the place from its foundation as a 'new town' after the Norman Conquest through its medieval importance as the chief port for Normandy and its later decline, to its revival, prompted by Brighton's growth, in the 19th century. Steyning, five miles inland, is even older; a Saxon town, it too had a port at one time. Its early importance is shown by its grand Norman church, originally much larger; in the 17th and 18th centuries it was a small regional centre, the occasional seat of Quarter Sessions, and the venue of three annual fairs. The fourth 'town', now no more than a village is Bramber, also founded as a 'new town', in the later 11th century, and like Arundel under the walls of a Norman castle. Later it earned obloquy as a 'rotten borough'; in the 18th century there were only 36 electors, and a visitor remarked that there was 'scarce a house fit for a stable'!

Other settlements too have declined. Botolphs and Coombes in the Adur valley, and Wiston, where only the great house and the church survive, are examples of 'deserted villages', and many rural farms, like Wappingthorn near Steyning, or Erringham near Shoreham, represent the sites of former hamlets.

Of rural occupations in the area described, apart from agriculture, the chief have been brickmaking (in Clapham), and quarrying and market-gardening (in Washington), and the extraction of salt in the lower Adur valley. The river Adur originally formed a wide estuary which has been reclaimed since the Middle Ages - about a third of Lancing parish is reclaimed land. A more modern industry, tourism, has been important for many years, not only on the coast. Bramber was described in 1928 as 'the tea-party paradise of its district', while Chanctonbury Ring was the destination of horse-drawn charabanc excursions from Worthing 70 years before.

The volume, which is self-indexed, contains 40 plates and 13 maps. The plates range from contemporary paintings of old Wiston House and of stoolball being played at West Tarring in 1856 to old photographs of Steyning High Street and

the Norfolk Suspension Bridge at Shoreham and modern ones of Findon fair and bungalows in Goring! The maps depict nearly every parish described and include five town plans.

The next volume of the Sussex History will deal with the Horsham area, and later ones with Arundel and Pevensey in East Sussex.

COURSES

Avoncroft Canal Summer School - August 1st - 8th, 1981.

The Course is designed for canal enthusiasts but should also serve as an introduction for serious students who wish to discover the fascination of canals. It includes lectures, two full-day coach trips, two half-day boat trips and other relevant visits.

Accommodation and board, tuition and visits - Shared room £77 + VAT
Single room £81 + VAT

Application forms from Avoncroft College, Stoke Heath, Bromsgrove,
Worcs. B60 4JS.

Losehill Hall, Peak National Park.

May 25th - 29th 1981	Canals of the Peak District	£73 + VAT
Aug. 22nd - 29th 1981	Holidays with a Difference - Industrial Archaeology	£98 + VAT
Oct. 16th - 18th 1981	Practical Industrial Archaeology	£41 + VAT

Three Residential Courses. Details and application forms from
The Principal, Peak National Park Study Centre, Losehill Hall,
Castleton, Derbyshire. S30 2WB.

Should any member take advantage of any of these or similar Courses
The Editor would be very pleased to have a short note of his experience for
publication in a future Newsletter.

CARTER BROS. of BILLINGSHURST

by A.G. Allnutt

In 1880, a Surrey Farmer, William Evershed Carter (Evershed was his Mother's maiden name) moved into Sussex and built a house called Newfields at New Pound, Wishborough Green. He had 4 sons, James, Sidney, Frank and Evershed (called Tod) who were approaching working age at the time when mechanisation of farming by the use of steam power was beginning to spread rapidly.

A business of Agricultural and General Engineers, steam haulage, and threshing was set up by the family based on a works they built at Wishborough Green. They called it Reliance Works and soon began to build up a reputation justifying the name. The scope of their activities was extended by agencies for other firms' products in the agricultural and domestic machinery field, including sewing machines, bicycles, prams, mangles and, later, cars. They could cope with major repairs to steam engines such as fitting new fire boxes and they made farm waggons, ploughs etc.

Soon after the business was founded, they realised that if the newly invented internal combustion paraffin oil engine could be made reliable enough for farm use it would oust the steam engine with its heavy demand on labour. So they used their exceptional mechanical talents in the design and production of a small horizontal engine which they called the Reliance. A major difficulty with oil engines in the 1880s was reliable starting and they overcame this by the use of a hot bulb which was heated by a special blow lamp before starting.

In the early models the blow lamp had to be kept going all the time the engine was running, but later a coil of thin mild steel was inserted in a position where it was kept glowing by the heat of the exhaust gas. These arrangements were patented, and it put them ahead of other makes.

Edward Blackstone of Stamford, head of a big manufacture of oil engines heard about them and attracted Frank and Tod to Lincolnshire to become his Works Manager and Designer and produce a Blackstone version of the Reliance. This engine was made in vast numbers and sold all over the world. All bore a small brass plate recording the Carter Patent. Blackstones also built some small vertical engines with the same patent and one (dated 1908) is on show at Amberley Chalk Pits Museum.

In the mid 1920s Blackstones started the production of a range of large horizontal oil engines with a spring injection system patented by the Carters in 1923. The 300 h.p. engine at Fishbourne Pumping Station that pumped Chichester water before the war has this patent and this engine has been given to the Chalk Pits Museum by the Portsmouth Water Company and will be moved to Amberley when a building can be put up to receive it. It also has a brass plate recording the Carter patent.

After Frank and Tod left the firm, Sidney and James stopped making oil engines and concentrated on their steam work and agricultural machinery. Their most successful product was the Unique hay elevator which sold in hundreds from 1910 to 1930. Originally it was driven from a horse gin, latterly by a Pettar oil engine. The model on show at Amberley is a fully working one they used to take round the Agricultural Shows for sale promotion. They could demonstrate with it everything the prototype could do.

Other products of their mechanical talent were a steam engine chimney which they patented, a mangle winnower and later a ditcher which worked on the back of a tractor and which won a Silver Medal at Royal Agricultural Society Trials.

The firm ceased to trade when the brothers died, finally going out of business in about 1960.

A humane killer and a domestic mangle they produced are also on show at the Chalk Pits Museum.

If you have any further information on Carter Bros., please tell the West Sussex Secretary.

CHANGES TO ADDRESS LIST

New Members

Brighton Area: N.G. Barnes, 39, Hanover Street, Brighton (Tel: 682791)

East Sussex Area Hastings Museum, Cambridge Road, Hastings (Tel: 435752)

West Sussex Area C.D. Allistone, 4, Fittleworth Drive, Felpham,
Bognor Regis.

OFFICERS

Chairman: A.J. Haselfoot, Albion House, Cobourg Place, Hastings, TN34 3HY
Vice-Chairman: P. Adorian, The Mill House, Gibbons Mill, Billingshurst.
Treasurer and Membership Sec: J.M.H. Bevan, 12, Charmandean Road, Worthing, BN14 9NB
Tel: Worthing 35421.
Gen. Secretary: R.G. Martin, 42, Falmer Avenue, Saltdean, Brighton BN2 8FG.
Tel: Office-Brighton 28479, Home-Brighton 33805.
Editor: Professor E.O. Taylor, Clare Cottage, Pett Road, Guestling,
East Sussex TN35 4EX.
W. Sussex Sec: A.G. Allnutt, 23 Beech Avenue, Chichester, PO19 3DR.
C. Sussex Sec: J.S.F. Blackwell, 21 Hythe Road, Brighton. Tel: Brighton 557674
N. Sussex Sec: E.W. Henbery, 10, Mole Close, Langley Green, Crawley.
Programme Secretary: D.H. Cox, 3 Middle Road, Partridge Green, Horsham, W. Sussex,
RH13 8JA.
Tel: Home: Partridge Green (0403) 711137)
Office : Crawley (0293) 27777 Ext. 3340.

COMMITTEE MEMBERS

Dr. B. Austen 1 Mercedes Cottages, St. Johns Road, Haywards Heath.
M. Brunnarius 30 Chanctonbury Road, Burgess Hill.
F.W. Gregory 292 Dyke Road, Brighton.
E.W. O'Shea 14, Pelham Terrace, Lewes, BN7 2DR.
R.M. Palmer 10, Charmandean Road, Worthing.
Air Marshall
Sir Frederick Home Farm, Herons Ghyll, Uckfield.
Sowrey

STOP PRESS - Publication

Branch Lines to Midhurst - by K. Smith and V.C. Mitchell. Middleton Press, Easebourne Lane, Midhurst, Sussex, GU29 9AZ. 96pp with 120 photographs. £4.95 + 55p postage. A new book, by one of our Members as part author, describing the three single railway lines that once served Midhurst.