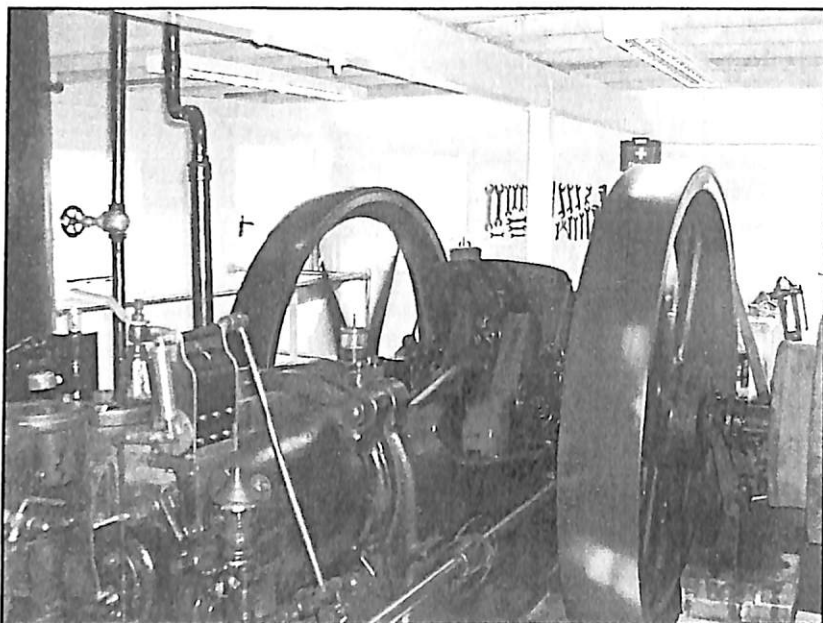


Sussex Industrial Archaeology Society Newsletter



Number 131

July 2006



The Tangye 'Suction' Gas Engine, now fully operational at Cobb's Mill, Sayers Common was built by J.W. Holloway & Sons, Engineers of Shoreham, Sussex in 1903/04. It was seen by Society members during the Sussex Mills Tour on 8th April and the SIAS visit on 27th May 2006.

ISSN 0263 516X

Registered Charity No. 267159

CONTENTS

Editorial	2
Forthcoming Events	3
Events from other Societies	3
Lecture on Concrete Ships	7
SERIAC 2006 in Sussex	8
SIAS Visit to Cobb's Watermill and Oldland Windmill	12
Coultershaw Beam Pump	13
Michael Palmer – an appreciation	14
Exhibition of ephemera, manuscripts and books	15
The British Engineerium at Hove	17
Dramatic Scenes at the Engineerium	18
Hellingly Hospital Railway	18
Maritime Matters	20
Tramfest 2006 at Crawley Down	21
Book Review	22
General Information	22
Officers and Committee	23

EDITORIAL**Robin Jones**

I had a telephone call from a member during May asking where Coultershaw Beam Pump was located. On Page 13 of this issue I have included a short article, with photographs, about the Beam Pump should there be other members not sure of its location. News of the closing of the British Engineerium at Hove came as a shock, but as John Blackwell points out in his article on Page 18, a saviour has come to the rescue.

Would contributors please note that the deadline for the next Newsletter, to be published in October, is the earlier date of 4th September 2006.

FORTHCOMING EVENTS

Pat Bracher

Saturday 12th August at 10.30 a.m. The Mills, Navigation and Railways of Barcombe Mills; a guided tour with Michael Green. Meet in the car park at TQ 435145. This will be followed by an afternoon visit to the Lavender Line at Isfield, TQ 452170 (admission charge payable). Contact John Blackwell 01273 557674.

Wednesday 20th September

10.30 a.m. A walk in Midhurst led by Alan Green. Meet at Midhurst Bus Stand at the north end of North Street (SU 887218). There is parking nearby or bus service 60 leaves Chichester 09.44, arrives Midhurst 10.25, and bus service 1 leaves Worthing Central Station 09.09 arrives Pulborough 09.58 and Midhurst 10.26. Lunch at The Spread Eagle or there is a pub by the brickworks to be visited in the afternoon.

2.15 p.m. A visit to Pitsham Brickworks at Cocking (SU 877198). Courtesy of Lambs Bricks with tour led by the Manager. Further details of both visits from Alan Green 01243 784915.

Saturday 21st October at 7.30 p.m. at West Blatchington Mill Barn.
A talk by Alan Crocker on 'Gunpowder Mills'.

Saturday 18th November at 2.30 p.m. at West Blatchington Mill Barn. AGM followed by a talk by Ron Martin on 'Ice Houses'.

EVENTS FROM OTHER SOCIETIES

Malcolm Dawes

Detailed below are events organised by other societies, which may be of interest to our members. If you have details for future events please send these to Malcolm Dawes, 52 Rugby Road, Brighton, BN1 6EB or e-mail to malcolm.dawes@btinternet.com.

Association for Industrial Archaeology Conference. This year the Annual Conference will be held on the Isle of Man from Friday 8th September to Thursday 14th September and is based in Douglas. The conference will be held at the Claremont Hotel where lectures and the AGM will take place. There will be visits to many industrial archaeological sites including mining, mills and transport. Further

details can be obtained from Simon Thomas, AIA Office, School of Archaeology and Ancient History, University of Leicester, Leicester. LE1 7RH, or e-mail: AIA@le.ac.uk.

Saturday 29th & Sunday 30th July, 10 a.m. to 4 p.m. *Special Stationary Steam Engine Event Weekend.* Brede Steam Engines, Brede.

Sunday 30th July *Bexhill Trams, Centenary Day.* Events commence at 12 noon from the Sailing Club, Bexhill with a Cavalcade to Cooden Beach. Telephone 01424 751798 or 01424 752668 for more details.

Sunday 30th July. *Classic Car Summer Picnic, cars of the 50s, 60s, 70s with period picnic equipment.* Amberley Working Museum. 01798 831370.

Sunday 30th July. *Worthing Bus Rally.* CHANGE OF VENUE. Now at Adur Recreation Ground on A259 next to the Norfolk Bridge, Lancing. Contact Chris Pearce. 01903 520286.

Saturday 5th August, 10 a.m. to 4 p.m. Brede Steam Engines. Due to current on-going removal of asbestos from the engines, full access is not possible. Please ring 01323 897310 for further information.

Sunday 6th August. *Classic Microcar and Scooter Rally, bubble cars, three-wheelers and scooters.* Amberley Working Museum. 01798 831370.

Monday 14th August, 7.30 p.m. *Lewes Railway Connections, how Lewes became connected to the national railway network.* A Southern Electric Group, Southern Branch talk by John Hollands. £2. Deall Room, Southwick Community Centre. 01273 504791.

Friday 8th & Saturday 9th September. Two events at Amberley Working Museum. The Museum is holding its first beer festival with over 20 different beers, half of them from Sussex microbreweries. There will also be displays of buses, fire engines & stationary engines etc. The festival runs from 6 p.m. to 11 p.m. A subsidised bus service will pick up from Brighton, Portslade, Shoreham & Worthing. Also

Amberley's Food & Drink Fair featuring local Sussex produce will be held at the Museum on Saturday 9th, 10 a.m. to 5.30 p.m. There will be demonstrations of cooking with beer etc. and the ale will also be on sale! More details for both events on 01798 831370.

Saturday 9th & Sunday 10th September. Heritage Open Days weekend. Access to buildings normally closed to public, with many Sussex buildings open this weekend. www.heritageopendays.org.uk.

Saturday 9th & Sunday 10th September, 10 a.m. to 4 p.m. Brede Steam Engines. (See note on 5th August).

Saturday 9th September, 10 a.m. *Guided walk along the Portsmouth and Arundel Canal Navigation.* Walk from Barnham Court Farm, Church Lane, Barnham to the River Arun at Ford. A 4 mile walk with much to see. Structures uncovered by the canal team will be on view. The walk will take approximately 4 hours so bring a packed lunch. There are frequent trains from Ford back to Barnham.

Sunday 10th September, 10 a.m. to 4 p.m. *Poyntz Swing Bridge on the Chichester Ship Canal will be in action.* The bridge is 300 yards south of the Chichester Basin.

Sunday 10th September 10 a.m. *Guided walk along the Chichester Ship Canal from Salterns Lock to Chichester Basin.* Meet at Salterns Lock, Chichester Marina. Organised by Chichester Ship Canal Trust. 01243 576701.

Sunday 10th September. *Wood from the trees, woodland trade crafts and steam-driven timber yard.* Amberley Working Museum. 01798 831370.

Monday 11th September, 7.30 p.m. *An evening of railway photography with David Eatwell.* Southern Electric Group. £2. Deall Room, Southwick Community Centre. 01273 504791.

Tuesday 12th September, 7.30 p.m. *Brighton Trams.* Kent & East Sussex Railway, Sussex Area Group talk by Ian Gledhill. Westham Village Hall, near Pevensey. 01323 845108.

Friday 15th September, 7.00 p.m. *Brighton Piers and Pleasure.* Polegate and Willingdon Local History Society talk by Christopher Horlock. St. John's Church Hall, High Street, Polegate. 01323 485971.

Saturday 16th & Sunday 17th September. *Open House weekend in London.* Opportunity to visit over 600 buildings across London – many normally closed to the public. www.londonopenhouse.org.

Sunday 17th September. *London to Brighton Bus Show.* Amberley Working Museum. 01798 831370.

Wednesday 20th September, 8.00 p.m. *Terriers past and present.* Sussex Transport Interest Group talk on William Stroudley's locomotives by Ralph Gillam. £2. Brighton Model Railway Clubrooms, London Road Station, Brighton. 01273 512839.

Saturday 23rd & Sunday 24th September. *Miniature Steam and Model weekend.* Amberley Working Museum. 01798 831370.

Thursday 28th September, 7.45 p.m. *Car advertising.* Eastbourne Historic Vehicle Club presentation by Keith Hawkins. Red Lion Public House, Stone Cross near Pevensey. 01323 843202.

Saturday 30th September. *Craft day, traditional skills and crafts.* Amberley Working Museum. 01798 831370.

Sunday 8th October. *Autumn vintage vehicle show.* Amberley Working Museum. 01798 831370.

Tuesday 10th October, 7.30 p.m. *William Stroudley A1 Terrier Locomotives.* Kent & East Sussex Railway, Sussex Area Group talk by Ralph Gillam. Westham Village Hall, nr Pevensey. 01323 845108.

Wednesday 18th October, 8.00 p.m. *Wandering on the railways with a camera in the 1960s.* Sussex Transport Interest Group presentation by Peter Groom. £2. Brighton Model Railway Clubrooms, London Road Station, Brighton. 01273 512839.

LECTURE ON CONCRETE SHIPS

Robin Jones

Nick Kelly, the author of the article *The 'Creteships': Concrete Shipbuilding at Shoreham 1918 – 20*, in SIH Issue 35, gave an interesting lecture on concrete ships in general at West Blatchington Mill Barn on Saturday 18th March 2006. Illustrated with slides, Nick pointed out that cement ships were being built in China in the 13th and 14th centuries, with some being built in France in the 1840s. Concrete ships do not rot, are virtually indestructible and have no scrap value. The ships at Shoreham were built by John ver Mehr, but there were other shipyards building concrete ships including those at Poole, Blythe and Northfleet. Barges as well as tugs were built using reinforced concrete. Nick then described how the ships were constructed pointing out that the hulls were 4 inches thick and were generally powered by triple expansion steam engines. They were mainly built for use in WW I and WW II. Mention was made of the *Creteships*, referred to in the article already mentioned and slides were shown of a number of these ships at various locations in Ireland as well as Shoreham and Southampton. The history of the *Cretegaff* was covered and a slide of its launch day at Shoreham was shown. It was also interesting to see the name of the ship recessed in concrete on the bow. Another view showed it as a floating clubhouse at Newry, where it is still in good condition. Mention of the *Cretemast* was made while a slide of the stern of this ship was shown. She only had a seagoing life of two months. An aerial view taken in 1945 of the basins where the concrete barges were built was also shown. Another vessel featured was the seaplane tender RFC 109, which was based at Shoreham after WW I, eventually renamed *Rutter* after being acquired by the Brighton & Hove Gas Co., where it survived until the 1960s. Another slide shown was of the *Aquarius* still to be seen in Shoreham Harbour as a houseboat, although port holes have since been cut along the side. Nick also mentioned the *Cretehawser*, which now lies abandoned on the banks of the River Wear and the *Creteravine* in Shetland. Nick also spoke about two 300-ton Auxiliary Motor Vessels, the *Molliet* and the *Viollet*, giving the history of the latter vessel stating it was built in WW I, giving the opinion that it would have been an ideal concrete ship to be preserved. Other concrete ships mentioned by Nick during his lecture included the *Traitor Armistice*, a large ship that operated to Angola and perhaps the most successful concrete ship ever built, the *Staag beton*

19, a 120 ton coaster fitted with an internal combustion engine and seen going through ice, and two paddle vessels made of concrete on the Murray River in Australia.

After a lecture on a most unusual subject lasting 1¼ hours, Nick concluded that there was no reason why future space ships could not be made of concrete.

Following a number of questions, John Blackwell gave a vote of thanks for an interesting talk, which concluded the 2005/2006 series of winter lectures.

SERIAC 2006 IN SUSSEX

Robin Jones

Our President Air Marshal Sir Freddie Sowrey welcomed 180 delegates to the Medical Education Centre at Chichester for this year's Conference on 22nd April. After giving an introduction about Industrial Archaeology, John Blackwell, our Chairman introduced the first speaker Brian Johnson who spoke on the first 25 years of Amberley Working Museum. Brian started by saying that John Warren was instrumental in setting up an Industrial History Centre supported by Peter Longley, who was the Treasurer. The site at Amberley was originally a chalk and lime working area which closed in 1965. When the site was a working concern, the De Witt kilns, built in 1904 and still in existence, were being used. Early slides showed many horses and unusual three wheeled carts moving the chalk and lime about the site as well as two steam locomotives. The site was owned by the County Council after closure and a lease was obtained in 1978 with the area opening as Amberley Chalk Pits Museum in 1979. Due to the wide variety of flora and fauna, not all the area has been developed. Now known as the Amberley Working Museum, the various industrial activities represented were described. They include a Narrow Gauge Railway, a Roadmaking Exhibition, a Rural Garage, a Southdown Bus Garage, an Electricity Hall and the Connected Earth Exhibition. Printing and Pottery are two of the many crafts that are carried out on site.

The second presentation was given by Fred Stanford, who explained how the Connected Earth Exhibition was set up at Amberley in a modern building. In the late 1960s, BT equipment was disappearing, so a move to start collecting items commenced in 1968, first at Swandean; then the collection was moved to Steyning in 1991, with the

main objective of making the equipment work where possible. In 1999 discussions took place to consider the future of the exhibits at Steyning and elsewhere, which led to the setting up of Connected Earth, a web-based museum of communications, founded by BT. There are eight museums in Britain with Connected Earth galleries. At Amberley, which opened in May 2002, one of the conditions being achieved is that all the equipment on show is able to work. It was pointed out that at the Royal Museum in Edinburgh the Connected Earth gallery shows static exhibits, while at Avoncroft Museum in Bromsgrove the main collection is of telephone boxes. Slides were shown of the exhibition at Amberley, to be seen by many delegates after the Conference. These included a reconstructed Post Office, a range of telephones and the Telegraph Room, where many teleprinters were on display.

Our next speaker was Harry Pearman from Subterranea Britannica who gave a humorous account of a mole's eye view of south-east England. He first spoke about dene holes showing various sections of their construction. Chalk mines were also discussed with the six miles of tunnel under Chislehurst and a large area under Bury St. Edmunds, as two examples. He explained that during a survey it was observed that a number of dark areas were seen, which was the result of carbon from candles used to illuminate areas of the mines. The white sand mine near Sevenoaks and another mine at Pulborough for moulding sand were also mentioned. Fuller's Earth excavated at Nutfield was used for cat litter, and there were also Lower Greensand mines under Dorking in Surrey.

A break was then made for a buffet lunch in the Dining Room and also to take the opportunity to look at the stands from other Industrial Archaeology Societies and Exhibits located in the foyer. One of the most interesting exhibits was Vic Mitchell's working model of Brunel's South Devon Atmospheric Railway, which was also on show at the Tramfest event and the Railway Weekend at Amberley Working Museum on July 8th and 9th. Middleton Press has just published a book *Brunel - A Railtour of his Achievements*, to mark the 200th anniversary of his birth and a review will appear in the next Newsletter.

The afternoon session started with our most recent committee member Alan Green speaking about the rise of industry in the Georgian Period. Social changes were occurring between 1700 and 1830 when some of the traditional cottage industries were moving into factories. One of the oldest industries was iron, which led to

developments at Ironbridge, where steam and water power were used. Another area of development was the Carron works near Falkirk in Scotland, where products were being made with little mechanisation. Brass founding developed in the 18th century in Bristol, but then moved to Birmingham. Textiles were also being produced with the abundance of wool, and many woollen garments were made at Bradford-on-Avon in Wiltshire. Richard Arkwright, who invented the water frame was mentioned as he not only opened a mill in Cromford, he built a model village for his workers. The cotton industry was also expanding in Lancashire, but working conditions in the mills were poor. These were improved in 1799 after the Combination Act was passed. Other industries mentioned that started in the Georgian Period were the ceramic industry founded by Josiah Wedgwood in Staffordshire, where he built the Etruria complex and a porcelain factory in Derby. This was an interesting talk covering the early days of industry.

Vic Mitchell then followed with a fascinating talk on *Midhurst Manufacturing Mysteries*. Although notable for his association with Middleton Press and the many railway and other transport books published by this organisation, Vic first spoke about the early days of Midhurst. A map of Midhurst dated 1916 showed the Gas Works and the Brickworks, founded in 1913 that made white bricks, later known as Midhurst Whites (see SIH 30 & 33), with some being used in the construction of the BBC building in London. He also mentioned that Fraser Nash, who had a number of divisions, set up one of their group companies at Fernhurst. Vic is an inventor of dental products and has developed a range of clear acrylic castings and has also made a washing device using air and water for dental work. His company known as Mitchell Mouldings closed in 1974 and Vic then looked into alternative energy and developed the Thermo Hush Blind. Production of bio-gas units was also carried out, the first design using dustbins. The publishing side mentioned earlier started in 1981, and 370 books have now been published. A diverse lecture covering many unknown facts about Vic Mitchell's early career before his better known publishing enterprise started.

After a break for afternoon tea, the final lecture of the Conference was by Martin Wilson on the *Pumping Heritage of London*. Martin is Chairman of ALPHA, The Association of London Pumping Heritage Attractions and he spoke first about the pumping station at Crossness, which was built in 1885 to take sewage from London. He explained the

architectural features of the building, which was built in the Romanesque style. The works were opened by the Prince of Wales, later to become King Edward VII. The four engines were single cylinder and were compounded in 1900. In 1880, the sewage was being treated so more workers were required. Between 1914 and 1920, the boiler house was extended to accommodate more boilers. Slides were also shown of the restored Prince Consort Engine. The pump house at Greenwich, also known as Deptford was mentioned. At Abbey Mills, West Ham, which was built in 1868 in the Byzantine style, there are eight electric pumps similar to the one on display at Brede. Western Pumping Station by Grosvenor Bridge, Victoria has a 170-foot high ornamental chimney. Low Hall Pump House at Walthamstow was also mentioned. This pump house, built in 1885 contains two Marshall C-class horizontal steam engines and there are ambitious plans to develop the museum as the Lea Valley Heritage site. The only site described in detail, which was identified as a clean water site, was Kempton. Here the original building housed five Lilleshall engines. Later in 1927 a new Engine House was built to accommodate two giant Worthington Simpson triple expansion engines installed in 1928. The final pump house featured was Kew Bridge, which has the 90-inch Cornish engine as well as a collection of water pumping engines.

The conference then closed with John Blackwell thanking all the lecturers for their contribution and for making an enjoyable and rewarding day. Thanks were also extended to the catering staff for providing the refreshments in the morning and afternoon and the buffet lunch. Particular thanks were extended to Bob Allen for all the hard work he put in organising a most successful Conference. Finally mention was made about next years SERIAC to be hosted by the Berkshire Industrial Archaeology Group at Reading on 21st April 2007. Most delegates then left for Amberley Working Museum, when on arrival they were conveyed by a Southdown open top bus to the Connected Earth Exhibition and the adjacent Electricity Hall to view the exhibits. Some delegates then returned home, while others enjoyed a meal in the Limeburners Restaurant.



VISIT TO COBB'S WATERMILL AND OLDLAND WINDMILL

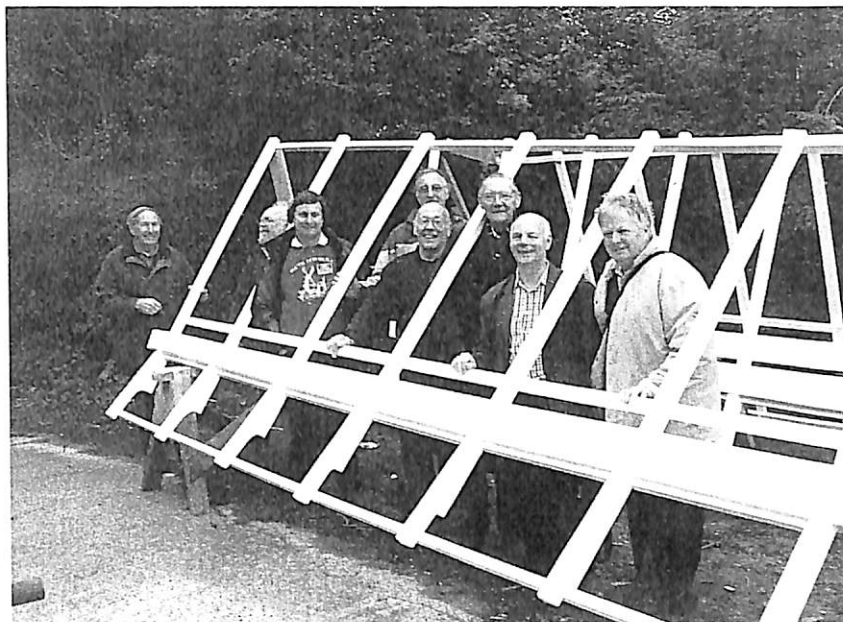
John Blackwell

Members visited Cobb's Watermill and Oldland Windmill on Saturday 27th May 2006. It was exactly 25 years ago that I last visited Cobb's, on a working party when the mill was sleeping (having ceased working in 1966) but deteriorating rapidly. What a transformation! Having been purchased by builder Les Thorpe and his son Lea, they have renovated the buildings to an impressive standard and turned the upper floors into living accommodation. Before commencing work a full photographic survey was undertaken and the flour dresser and crusher and other machinery occupying areas to be converted were carefully stored in containers, so although it is not possible at the present time to restore them to full working order, to do so long term is realistic. The restored wheel originally drove a horizontal pit shaft carrying 6-foot diameter bevel wheels with wooden cogs to drive, through cast iron stone nuts, three (later four) pairs of stones arranged in line on the stone floor. This innovative arrangement, instead of positioning the stones around the great spur wheel, was almost certainly the work of William Cooper of Henfield who rebuilt the mill circa 1868 and whose nameplate is on the pentrough. All the above was inspected, and for the remainder of the ground floor a state of the art museum is planned. The Tanyge gas engine, shown on the front cover, (which I oiled and greased 25 years ago) was working and its characteristic "thump" on the exhaust stroke reverberated around the engine house; well done to the enthusiastic band of restorers!! The accompanying gas producer plant, also installed in 1906 cannot now be used, for obvious safety reasons, propane being now used as the fuel. For more on the mill see *Sussex Industrial History No 11, 1981*.

We then travelled to Oldland Mill which again I visited some 25 years ago in the wonderful company of the late Frank Gregory, when the mill was in such a parlous state we could only peep into the round house. The date of construction of this post mill is uncertain but it is thought to be between 1755 and 1824. She last worked by wind in 1912 and then began a long decline until 1981 when the Hassocks Amenity Association leased the mill and began the total rebuild, ably led by Philip Hicks. She now looks her old self, but there is still a few more year's work to be done. Currently her sweeps are being made off site and a few of us took the opportunity to inspect the work. With the

sweep frames in a horizontal position the increasing angle of the sailbars to catch the wind was clear to see, (typically for Sussex 4° at the tip opening out to 22° at the heel). This was worked out over hundreds of years by the old time millwrights; today another old-timer Danny Jarmann is supervising their construction.

This was a really interesting afternoon and it was nice to see a mix of over twenty SIAS and Mill's Group members. Our thanks to Peter Hill for arranging the visits and preparing guide notes and to Les Thorpe and Philip Hicks for showing us around and of course to all the volunteers and others who have achieved so much in twenty five years.



Inspecting the new sweeps for Oldland Windmill. *Photo by Peter Holtham*

COULTERSHAW BEAM PUMP

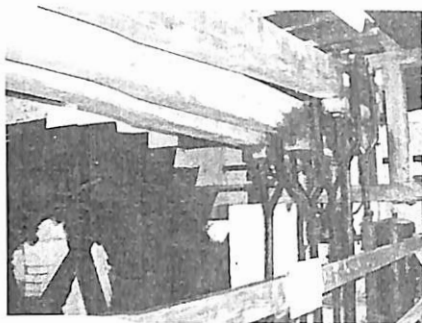
Robin Jones

Coultershaw Beam Pump was installed in 1782 to supplement the water supply to Petworth House and the town of Petworth. The Beam Pump is located on the A285 road 1½ miles south of Petworth at map reference SU 972194. The waterwheel driven pump worked until

about 1960, pumping water 150 feet up from the River Rother. Restoration was carried out by SIAS, and Lord Egremont officially restarted the pump on 4th July 1980. The waterwheel and pump is protected within a clay-tiled wagon shed, which came from Goodwood. The upper storey and entrance is now a display area where a number of working pumps are exhibited as well as pictorial displays about the Rother Navigation and the railway, Petworth Station being only ¼ mile south-west of Coultershaw. Coultershaw Beam Pump is open on the first and third Sundays of each month between April and September and on all Bank Holiday Mondays. It was also open on National Mills Day, which this year was on 14th May when the accompanying photographs were taken.



Coultershaw Beam Pump with fountain which is driven by the beam pump.



Pump rods and beams, right, with the breast-shot waterwheel, left.

MICHAEL PALMER – an appreciation

Robin Wilson

Michael Palmer, who died on 22nd September 2005 aged 87, was a gifted engineer and modest gentleman. He was a member of SIAS for over 25 years, a committee member for 20 years, and played a major role in the restoration of the Coultershaw Beam Pump in the period 1976-80. He took over as leader of the Coultershaw Group and Hon. Curator on the death of Alan Allnutt in 1989, a role he held until 2001.

Michael was born on 31st January 1918. He went to Shrewsbury School, going on to New College Oxford to read Engineering Science, graduating in 1939. He was apprenticed to Metropolitan Vickers

Electrical Co. Ltd. Manchester as a mechanical engineer working on combustion system development including the design and performance estimation of Whittle's axial flow jet engine.

After the war Michael joined Ricardo & Co. at Shoreham and was in charge of combustion research for gas turbines. In 1956 he transferred to Hawker Siddeley Nuclear Power to investigate the design of nuclear reactors for merchant ships. In 1961 the team concluded that the scheme was uneconomic and Michael returned to Ricardo's where he remained until his retirement in 1982.

At Ricardo's, Michael was involved in a variety of design and development projects, central heating, food processing (including an egg cleaning machine which resulted in scrambled eggs!) and the use of gas and steam turbine engines for cars and commercial vehicles.

Michael is survived by his wife Denise, whom he married in 1946, and by their son and two daughters. They lived most of their married life in Goring-by-Sea, becoming closely involved with the local community and St Mary's Church, where Michael practised his student day interest in campanology. He undertook voluntary work at Methold House, Gifford House and Salvington Lodge. He designed and built his own boat and designed aids for the disabled. He could turn his hand to anything and is greatly missed, particularly at Coultershaw, where Michael is remembered for his friendship, calm approach to problems and his ingenuity in solving them.

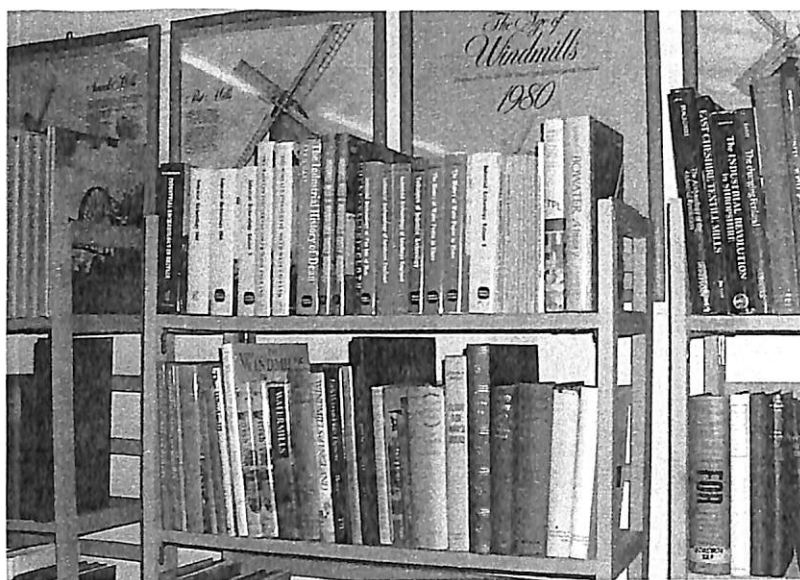
EXHIBITION OF INDUSTRIAL ARCHAEOLOGY EPHEMERA, MANUSCRIPTS AND BOOKS AT POLEGATE WINDMILL

Robin Jones

The published catalogue, giving details of items at the Exhibition on 28th and 29th May 2006, listed an amazing 600 items of material published on Windmills, Watermills, Papermaking and Industrial Archaeology. The Exhibition was organised and mounted by Alan Ticehurst. Of the many books relating to Industrial Archaeology there were a number about John Smeaton, a civil engineer, who was elected to the Royal Society in 1753. A book by A.W. Skempton, published in 1981 and priced at £25 describes John Smeaton as one of the most important 18th century engineers. Another book in the Exhibition was *The Newcomen Engine in the West of England*, which describes engines in that area and their construction. General Industrial

Archaeology books for sale covered various areas of Britain as well as a book by G.M. Binnie entitled *Early Victorian Water Engineers*, which describes the building of pumping stations, dams and waterworks and a book published in 1847 and priced at £250 on the *Principles of Mechanics of Machinery and Engineering*.

There were many books in the Exhibition about papermaking with a strong emphasis of this industry in Kent, considered to be the home of *papermaking in England*. Two examples on display were *Notes on the Manufacture of Hand Made Paper*, published in 1936 and priced at £36 and *Bowater, A History* by W.J. Reader priced at £16.

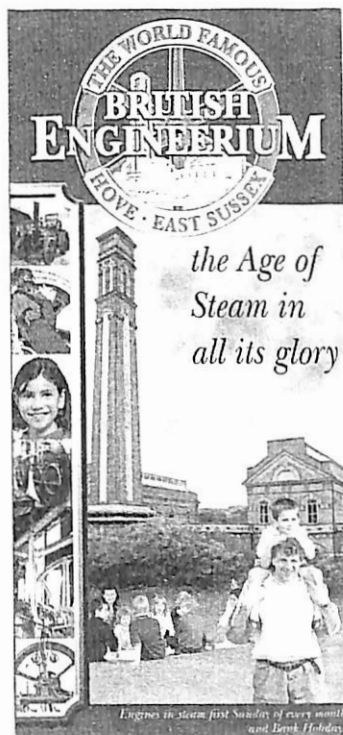


A selection of the many books on display covering Industrial Archaeology as well as Windmills and Watermills



During the early part of the year, it was announced that the British Engineerium at Hove would close at the end of April 2006 after 32 years. The Trustees were unable to raise the funds necessary to continue, and most reluctantly decided to close the museum. An auction to dispose of the collection was arranged by Bonham's at the Engineerium on 10th May, with viewing taking place on the previous two days. Advertised as The Jonathan Minns' Collection of Industrial Archaeological Artefacts, the collection was assembled over 40 years and charted the development of mechanical engineering. A number of historically important scale model locomotives and items of memorabilia amounting to approximately 400 lots were for sale. The exhibits are located in a beautifully restored Victorian water pumping station, with two of the steam engines still in situ.

In the main exhibition hall the 16-ton Corliss steam engine could be seen, while in the two engine houses are the splendid Eastons & Anderson beam engines which stands over a 50 metre deep well. Installed in 1875, they supplied 150,000 gallons of water per hour to the local community. Below in the underground tunnel is the original boiler house where four Lancashire boilers are located. The Engineerium appealed to both young and old and was popular with families providing a unique insight into the fascinating development of technology. However at the last minute the collection was saved as described in the next article by John Blackwell.



DRAMATIC SCENES AT THE ENGINEERIUM

John Blackwell

On Tuesday 10th May I attended what was expected to be a sad day for many; the auction of The Jonathan Minns' Collection of Industrial Archaeological Artefacts. There was a buzz of anticipation as the auctioneer mounted the rostrum. This was quickly silenced as he announced a half hour delay due to "technical reasons". Speculation started; was this an eleventh hour, fifty nine minutes plus thirty, rescue or merely due to the late arrival of an international bidder? At 11 a.m. came the dramatic news the entire collection had been sold to an unnamed buyer who was also expected to purchase the building and engines. A spontaneous standing ovation immediately ensued, somewhat surprisingly as there were buyers from all parts of the UK and I certainly heard a few American accents. Everyone I spoke to seemed delighted, these included a prospective bidder for one of the heat engines from Bristol, a buyer who had driven through the night from Newcastle and a gentleman who had flown in to Shoreham. Bonham's, the auctioneers claimed to have amassed a useful database for future sales (I suspect they were also reimbursed for their expenses); in fact the only dissenting voice was the caterer. The purchaser turned out to be local entrepreneur, Mike Holland, who also bought the building and engines, for a reported £2m. The museum will be closed for six months for a £50,000 facelift and we wish the new owner every success.

THE HELLINGLY HOSPITAL RAILWAY

John Blackwell

This article forms a postscript to the survey of railway lines in Sussex.

In 1898 work started on the construction of the East Sussex County Asylum at Hellingly. To carry materials to the site the contractor was required to build a standard gauge tramway from the LB&SCR station at Hellingly, which was operated using an 0-4-0 saddle tank locomotive built by Peckett's of Bristol. When the asylum opened in 1902 it was decided to electrify the one-and-a-quarter mile line. Robert W. Blackwell (no relation) & Co. Ltd. of 59 City Road London E.C. equipped the line with overhead cables supported on cast iron single-armed trolley poles; power being supplied by the asylum's power plant. A small four-wheeled tramcar, seating twelve, carried patients, visitors and employees. In addition an 0-4-0 steeple-cab locomotive equipped

with a single-arm trolley pole was purchased to haul coal trucks from the exchange sidings at Hellingly Station. The passenger service was discontinued in 1931 and the tramcar body was then used as a sports pavilion in the grounds of the mental hospital as the asylum had become, surviving until the 1960s. With conversion of the hospital boilers to oil fuel, the line officially closed on 25th March 1959. The locomotive and power cables etc. were disposed of for scrap.

Our exploration of the route starts from Hellingly Station on the single line from Polegate to Eridge, the 'Cuckoo Line', which closed in 1965. The station, now a private residence, remains unaltered and opposite the platform, where the 'Cuckoo Trail' now runs, was, until 1933, a wooden platform for intending hospital passengers; no trace of this remains. The southern end of the station platform has Staffordshire blue platform edge bricks, one of which has been laid 'upside down' and bears the inscription "Joseph Hambett's Patent. West Bromwich". Near this end a footpath diverges to the east and after a few yards a concrete gatepost can be found in the undergrowth to the right immediately before entering a large field. This marked the boundary between LB&SCR property and the hospital railway. Turn through 180° and the route of the hospital line can be seen running between two iron fences. Following the western boundary of the field the alignment has been grassed for exercising horses and can easily be discerned. The two lines of fencing continue a distance of approximately of 350 yards to Park Road, but this is private property and cannot be followed. The line crossed Park Road at TQ 588119, an iron gate on the station side of the road survives. The line cut across the corner of a field; this section was not protected by gates and has been altered by modern farming. It then crossed New Road at TQ 589119, where the gate still survives, although now attached to a modern farm gate on the hospital side of the road. From here the alignment can be seen running to the imposing hospital buildings.

The hospital grounds were entered behind the lodge at TQ 590122. Walk a few yards along the main drive and bear right at the entrance to Rosslyn House, to approach the rear of the lodge, and almost hidden in the trees is the last remaining cast iron trolley pole complete with single-arm bracket. Retracing ones footsteps you are on the alignment and where it emerges at the main drive is probably another trolley pole but without an arm, now used as a telephone pole. The alignment is now a footpath running parallel to the drive; a loop that served Park

House (now derelict and ready for demolition) can be easily discerned. Approaching the main complex the line curved to the right over a weighbridge to a platform, later used as a coal stage, with a stub to the engine shed and workshop. This area is now inaccessible as the main buildings have been sold to a developer but can be viewed from the security fencing. With binoculars one should be able to see a small cut out at the apex of the right hand door, which was cut in 1903 to allow the overhead wire to pass through. Note also the impressive brick water tower that served the hospital.

Further reading *The Hellingly Hospital Railway*, Peter A Harding
ISBN 009509414 5 X



Looking towards the hospital from
near Park House siding in 1957
Photo. from Peter Harding's booklet



The same view in 2006
Photograph by Peter Holtham

MARITIME MATTERS

Robin Jones

On Monday 4th September *PS Waverley* will be departing at 9.30 a.m. from Worthing Pier to operate a cruise to Yarmouth, on the Isle of Wight, Swanage and Lulworth Cove. Passengers can alight from the ship either at Yarmouth, when it arrives at 12.30 p.m., Swanage at 2 p.m. or stay on board for a non-landing cruise to Lulworth Cove. On the return journey *PS Waverley* picks up passengers from Swanage at 4.45 p.m. and Yarmouth at 6.15 p.m. She then continues to Portsmouth Harbour arriving at 7.45 p.m. Passengers return to Worthing by coach arriving at 9 p.m. *PS Waverley* also operates a cruise from Worthing Pier on Thursday 21st September departing at 12.30 p.m. for Dover arriving at 7.30 p.m. Passengers then return by

coach to Worthing arriving at 9.30 p.m. Further details and inclusive fares can be obtained by telephoning 0845 130 4647. Bookings can also be made online through the Waverley Excursions website www.waverleyexcursions.co.uk.

TRAMFEST 2006 AT CRAWLEY DOWN

Robin Jones

This event, organised by the Sussex Area Group of the Tramway & Light Railway Society was held at The Haven Centre on Monday 29th May 2006. There were many tramway layouts on display, including Peterstown, a layout representing a small town with a tram system and a 1930s street scene representing the 3ft. 6in. gauge tramways with tramcars from Poole, Bournemouth, Hastings and Maidstone. A model of Volk's Electric Railway, still operating on Brighton seafront, was also on display, with all three stations and the entire fleet of 10 cars.



Model of Aquarium Station of the Volk's Electric Railway, with a larger scale unit in traditional livery behind the track on the left.

 **BOOK REVIEW**

Robin Wilson

Gwilym Roberts, *Chelsea to Cairo* (Thomas Telford Ltd 2006) hardback pp 464 illustrated. ISBN : 0 7277 3411 3 £19.95 (available from ICE Bookshop, 1 Great George Street, London, SW1P 3AA)

Chelsea to Cairo is a fascinating account of the history of John Taylor & Sons, their predecessors and successors, as consulting engineers to the water industry since 1784.

The main story is preceded by an interesting account of the development of water supplies up to the 18th century with particular reference to London. The Coultershaw Beam Pump is mentioned (and illustrated) as an early example of water supply.

Thomas Simpson was appointed Engineer to the Chelsea Waterworks Company in 1784. He was succeeded by his son James in 1823 who established a consulting practice as well as a company manufacturing engines and pumps. John Taylor joined James Simpson in 1836 and on James' death in 1869 formed his own practice of John Taylor & Sons.

The book is well illustrated and easy to read. It records the numerous water supply and later sewerage projects with which the firm was involved with, in London and the rest of the UK, the Middle East (Greater Cairo Wastewater Project) and elsewhere overseas up to the present time.

This Newsletter is published quarterly in January, April, July and October and contributions for the next Newsletter should be sent to the Editor by the 4th September 2006.

Opinions expressed are those of the respective authors and do not necessarily reflect the views of the Society unless specifically stated.

Subscribing to the Sussex Industrial Archaeology Society gives automatic membership to the Sussex Mills Group.

The Sussex Mills Group also produces a Newsletter that is sent to members with this Newsletter.

All photographs are by Robin F. Jones, unless otherwise stated.

Printed by PLAN^AHEAD, 42a Commercial Road, Eastbourne.

Website www.sussexias.co.uk

Sussex Industrial Archaeology Society

President Air Marshal Sir Frederick Sowrey,
Home Farm, Heron's Ghyll, Uckfield.

Chairman J. S. F. Blackwell, 21 Hythe Road, Brighton. BN1 6JR
(01273 557674)

Vice-Chairman Brig. A. E. Baxter, 9 Madeira Avenue, Worthing.
BN11 2AT (01903 201002)

General Secretary R. G. Martin, 42 Falmer Avenue, Saltdean,
Brighton. BN2 8FG (01273 271330)

Treasurer, Membership Secretary and Archivist
P. J. Holtham, 12 St. Helens Crescent, Hove. BN3 8EP
(01273 413790)

Chief Editor B. Austen, 1 Mercedes Cottages, St. Johns Road,
Haywards Heath. RH16 4EH (01444 413845)

Newsletter Editor R. F. Jones 3 Nutley Mill Road, Stone Cross,
Pevensey. BN24 5PD (01323 760595)
E-mail robinjones@lantic.fsnet.co.uk

Programme Co-ordinator Pat Bracher, 2 Hayes Close, Ringmer,
Lewes. BN8 5HN (01273 813902)

Committee C. Bryan M. H. Dawes Diana Durden A. H. J. Green
C. C. Hawkins P. J. Hill Claire Seymour R. L. Wilson

Area Secretaries Eastern Area R. F. Jones – Address above
Western Area Brig. A. E. Baxter – Address above
Central Area J. S. F. Blackwell – Address above
Northern Area E. W. Henbery, 10 Mole Close,
Langley Green, Crawley. RH11 7PN
(01293 406132)

SERIAC IN SUSSEX ON 22nd APRIL 2006



Norman Langridge demonstrates a scale model of Brunel's South Devon Atmospheric Railway in the foyer, during the Conference. The carriage on the left moves along the white tube from end to end.



Delegates attending the Conference board a Southdown Bus at Amberley Working Museum to be transported to the Connected Earth Exhibition.