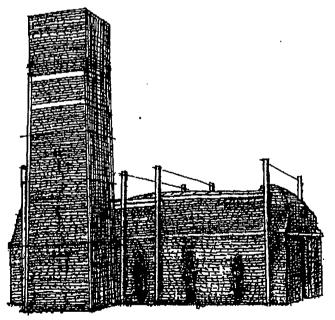


SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY NEWSLETTER

Newsletter No 120

October 2003



COCKING - PITSHAM BRICKINDRICE Doundrayofk Will - bessel on

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@ B.C. Hartin 2003

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FUTURE PROGRAMME

2003

Saturday 22nd November at 2.30 pm at West Blatchington Mill Barn. SIAS AGM followed by a talk by J. Day who is an authority on 19th century ordnance will give an illustrated talk on " *Unusual Big Guns*"

2004

WINTER LECTURES at West Blatchington Mill Barn will take place on Saturdays at 7.30pm.

Contact Peter Hill, 01273 776017

17th January. Garry Collins on 'Brighton Locomotive Works'.

20th **March**. Patricia Berry on *'The Lost Village of Tidemills'*. This talk will include new material on the Seaplane Base.



Tuesday 10th February at 7.30pm in the Committee Room at East Pallant House, Chichester. Joint meeting with Chichester Museum Society. 'Steaming Through Sussex'. Bill Gage takes a nostalgic look at the time when engines had character and a railway journey was an adventure. 50p entrance fee.

Contact Chris Bryan 01243 773158.

Sunday 14thMarch from II.00 am. Working party at Coultershaw Pump. Wear old clothes, bring picnic lunch

Contact Robin Wilson 01798 865774

Saturday 17th April SERIAC at Petersfield, Hampshire application forms will be enclosed with the January *Newsletter*

Contact Bob Allen 01323 896724.

Friday 23rd April at 7.00 pm at the Library Theatre, Richmond Road, Worthing, TQ 148 029. C Selbie will talk on 'Worthing, as it is and as it was'.

Contact John Blackwell 01273 557674.

Saturday 22nd May at 10.00 am. A Wey and Arun Canal Narrowboat trip. Meet at the Onslow Arms, Loxwood TQ 041311. A 2 hour cruise on the canal in the narrow boat *Zachariah Keppell*. This replaces the 30th August 2003 cruise, which was fully booked, but had to be cancelled due to insufficient water in the canal. Members who booked for the August cruise have now been allocated places on this one, but some members may not be able to come on this rearranged date and at the earlier time of 10.00 am. Could members who have already booked on this cruise let Robin Jones know if they are unable to come due to the earlier departure time. A waiting list is now open for other members to take any places due to cancellations. Please contact Robin Jones on 01323 760595 if you are interested and £5.50 per person will be requested nearer the time if places become available. Numbers limited to 30. Money will be refunded for any members unable to go on the cruise in May.

Saturday 22nd May 2004 at 2.30 pm. Visit to Baynards Railway Station near Rudgwick TQ 077351. Members will be able to view the external features of this restored station and inspect a selection of historic vehicles on display. Numbers limited to 30, and regretfully no dogs are allowed. Bookings are now being taken. Note that this is the same day as the canal trip.

Contact Robin Jones, 01323 760595.

PLEASE NOTE THAT IT IS ESSENTIAL THAT YOU INFORM THE CONTACT PERSON FOR ANY VISIT AT LEAST 7 DAYS IN ADVANCE IF YOU ARE GOING TO ATTEND.

Ron Martin

PITSHAM BRICKWORKS, COCKING

A saurvey has recently been carried out of the surviving down-draught kiln at this site and a sketch of this is shown on the front page. You will have seen in the last *Newsletter* that I was asking for photographs taken when the Society visited the site in 1978. Apart from the demolition of the chimney stack the kiln is in much the same condition as it was then, but now the bricks are fired in a modern gas-fired kiln of refractory material. The pug mill, the moulding sheds and drying sheds are virtually unchanged. The following is a partial reprint of the article written by the late John Haselfoot about the Society's visit in *Newsletter* No. 20.

PITSHAM BRICKWORKS

John Haselfoot

The works is one of the few remaining ones where hand-made bricks are produced; two separate installations with different firing methods are used - an open clamp, containing 100,000 bricks which is fired in the summer; and a downdraught barrel kiln which can be used all the year round.

Many different shapes and sizes of bricks are made, including thin Elizabethan bricks and very thin Roman bricks, and the ones burnt in the open clamp are mainly used for the repair of old walls and buildings as the varying colours produced enable them to be matched to the existing brickwork.

A walk down a grassy path, where the profusion of blackberries delayed some members, brought us to the clay-pit. After the removal of about 1 foot of sandy overburden the blue-grey clay is dug out in layers of about 3-4 feet deep. Originally it was transported to the moulding sheds in wheelbarrows but at a later date a small tramway with iron tub trucks was installed; this is now disused and buried in brambles and the clay transported by lorry.

From the mixing and moulding sheds the 'green' bricks are stacked for drying in long rows in the open with a small pitched roof over them. The clasp, now in the open, is constructed with two layers of coke at the base, small firing holes being left at intervals along the sides - in some cases coke breeze is also mixed with the clay from which the bricks are moulded to assist in burning the bricks. This method of firing is unfortunately productive of many failures, either from under-burning which

leaves the bricks soft and friable, or from over-burning which welds them together.

In spite of the high failure rate there is a steady demand for bricks made by the old traditional method - the clay hand-dug, the sand dried in the open, the bricks hand-moulded and fired in a clamp - for the repair of ancient brickwork.

At the installation using the barrel kiln we were able to see the clay and sand being mixed and bricks hand-moulded. The clay, after being dug, is left in water overnight in a pit, the sand being added in the mixing machine, which has a series of knives arranged helically along a slowly revolving shaft, and extrudes the clay in a continuous flow about 9 inches square. A number of different shapes of the 'frog' (produced by projections on the bottom plate of the mould) were seen - rectangular of various sizes, T-shaped, Z-shaped, 2 squares, etc. - it appears that each moulder had his own individual trade mark in the shape of the frog. After moulding the bricks are dried under cover in long rows on racks with steam pipes below them.

The kiln is built of fire-bricks with 5 firing holes on each side, firing lasting 72 hours. It was rebuilt about 9 years ago, the previous kiln having lasted 55 years before it needed rebuilding. A remarkable feature of the kiln is that the clamping bars on the sides are old tram-rails, said to have come from Woolwich.

Labour costs at these works, with a yearly output of perhaps 500,000 bricks, must be remarkably low - only 6 men are employed.

SUSSEX MAIN LINES - A YEAR 2003 SURVEY John Blackwell

7 BRIGHTON TO THREE BRIDGES

Standing on the concourse at Brighton Station it is not too difficult to cast one's imagination back one hundred years, to the days of the LB&SCR's immaculately turned out locomotives and passengers (not customers in those days). The ladies would have been dressed in long skirts and carrying parasols and their escorts in frock coats and top hats; all redolent of the smell of steam and horse droppings. Behind one would be the 1841 terminus building designed by David Mocatta, when early railways could afford an architect, and now the only surviving station of his design for the London to Brighton line. Originally there was a colonnade on the south, east and west sides but this was removed when the present porte-cochere was erected in 1882/3. At the same time the magnificent and recently restored three bay curved train shed was constructed. Designed by H.E. Wallis the ironwork was prefabricated by the Patent Shaft & Axletree Co. Ltd (the name indicates the firm's origins, shafts and axletrees being components of carriages and carts) of Wednesbury, Staffordshire. It was delivered to Brighton by rail and erected above the existing train shed without a day's operation being lost! Lit by electric arc lamps with current supplied by The Hammond Electric Light Co, whose generators were situated in the premises of Reed's Foundry in North Road (where the Royal Mail Depot is now). It must have been a source of wonder to the poorer inhabitants of the town. The hanging clock with its four faces and LB&SCR monogram was also allegedly illuminated from within, by gas or electric? Another puzzle is how the clock was wound, could it be lowered or reached by a very long ladder?

From a Grade I listed station one travels to an apology for a station: Preston Park. The station opened as Preston on 1st November 1869 to serve the newly built Clermont Estate. Like many stations the construction cost was shared between the developer, Daniel Friend, and the railway company. With the opening of the Cliftonville Curve on 1st July 1879, which allowed through running to the Coastway West line the station was rebuilt as two island platforms and renamed Preston Park. I commuted from this station for nearly forty years and can well remember the generous canopies and cheery fire in the up platform waiting room. In the early seventies the same canopies became

"dangerous" and these and the platform buildings were swept away. The original booking office, now an estate agent's office, survives but the station house that adjoined to the north went in the early sixties. To the west of the north portal of Patcham Tunnel stand a pair of railway cottages which date from the 1850s with decorative barge boards and guttering passing in front of the dormer windows.

Clayton Tunnel, with the castellated north portal, (was this another of Mocatta's architectural contributions to the line?) was the scene of a terrible accident on the 25th August 1861 when the frailties of early signalling and human error allowed a following train to smash into one that was stationary in the tunnel. The carnage in the dark caused by scalding steam from the engine's boiler and the splintering of the wooden carriages was awful, resulting in 23 deaths and 126 horrific injuries. The railwayman's cottage above the north portal was built in 1849.

Hassocks Station, opened with the line in 1841. Later called Hassocks Gate; the gate on the nearby turnpike at Stonepound. Between December 1880 and August 1881 a magnificent new station was erected, in the same style as those on the Cuckoo and Bluebell lines with half timbered upper storeys, decorative eaves, stained glass window panels and charming porches. It was grander than any other with a range of buildings on both up and down sides. The booking office had a lantern roof and the spacious platforms were protected by graceful canopies, supported by decorative cast iron columns. In a blatant act of vandalism by British Rail it was all demolished in 1973 except for half of Mocatta's original station that somehow had survived the 1880/81 rebuilding; this lingered for a few more years. Ironically James Longley & Co of Crawley was responsible for building the 1881 station and its truly awful (and still surviving) 1973 replacement. In the erstwhile goods yard to the west can be found a goods shed dating from the 1860s, the site of the Keymer & Ditchling Gas Works and a siding that ran to Stonepound Sand Pit on the opposite side of the A273, the site of which is now a small nursery. The bridge under the road at TQ 299154 is still intact.

Burgess Hill Station is not thought to have opened with the line in September 1841 but it was operational by October 1843 when a temporary closure took place until May 1844. The wooden shed on the up platform is one of the oldest surviving buildings on the line. Erected as a waiting shed in 1853, it cost £110. It was built of brick with a front of

vertical tongue and grooved boarding, and had a steeply pitched roof covered in fish scale pattern clay tiles. Unfortunately the roof has been replaced totally altering its appearance. Lattice-work windows completed its attractive original appearance. At present unused its survival must be in doubt. Adjoining it to the north was the two-storey station house demolished in the seventies. A completely new station was built in 1877 with offices on the road bridge above the tracks, access to the platforms and waiting rooms is by covered wooden stairs, which were renewed in modern materials a few years ago. At the same time the stone blocks which supported the early permanent way when in a cutting, and which at some time had been incorporated into the platform facings, vanished (NB wooden sleepers were not used in cuttings). The 1860s goods shed survives now appropriately as an architectural salvage warehouse.

Wivelsfield Station opened on 1st August 1886 but was known as Keymer Junction until 1896 as it had replaced Keymer, which was situated on the Lewes branch immediately after the turn off a hundred metres south. Wivelsfield was the scene of another terrible accident on the 29th December 1899 when in thick fog an up train smashed into the rear of the Newhaven boat train as it pulled away from a signal resulting in six fatalities. For over 100 years the station maintained the appearance of a Victorian country station with wooden platforms and two identical timber waiting rooms roofed with finely proportioned decorative canopies. A wooden booking office with slate roof together with long flights of covered stairs completed the ensemble. Recently the up waiting room has been replaced with a bus shelter and its partner will probably share the same fate.

Haywards Heath was a township created by the arrival of the railway. The present non-descript station, built in 1932, replaced an equally nondescript one. Of more interest is the fact that in 1857 an employee of the LB&SCR, John Saxby, was allowed to use a site, now part of the main car park, as a signal workshop and developed his signal interlocking patent of the previous year prior to entering into a partnership, in 1863, with John Stinson Farmer and founding the famous signalling company with new works at Willesden in North London. Saxby and Farmer held a virtual monopoly for the supply of signalling equipment to the LB&SCR until 1904 and most of the surviving signal boxes were designed by the company. Of interest nearby is the Southdown Bus Station now unused and under threat of

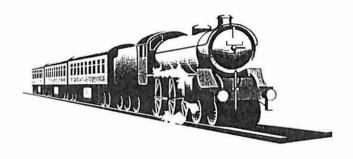
demolition, and the fine 1930s Caffyn's garage and car showroom in Market Place. A mile further north at Copyhold Junction a branch was built in 1883 to connect with the Lewes & East Grinstead line (part of which is now the Bluebell Railway) at Horsted Keynes. The branch closed in 1963 but remained as a siding for many years as far as the Ardingly Station site, which became a roadstone depot.

The most imposing structure on the line is the Ouse Valley viaduct. Designed by John Urpeth Rastrick, the engineer who was responsible for the construction of the line. This graceful structure is constructed of brick with 37 piers rising to a height of 96 feet (29.5 metres) and a total length of 1475 feet (450metres). It has a balustraded parapet of Caen stone with a pair of temples at each end. Each tapered pier has a different height pierced opening to reduce weight. Many of the 13 million bricks used in its construction were made at Piddinghoe near Newhaven and shipped using the Upper Ouse Navigation to Balcombe Wharf, the terminus of the navigation, which was sited on the east side of the present road. The views from the viaduct are superb but seen from below its beauty can be truly appreciated. Balcombe Station was a rural backwater but in recent years the heavy hand of the moderniser has been at work, the double gabled station house of 1869 has been demolished to make room for a modern footbridge replacing a typical cast iron product supplied by the Plimlico Foundry of Henry Young about 1900. A reminder of a railway strike in 1867 was carved in the stone of the cutting to the south of the booking office on the down side. Although now barely legible it reads "W F C The Strike of the L B & S C R Engine Drivers Tuesday 26 March 1867". Why and by whom it was carved is a mystery unless WFC was a striking driver or fireman.

Stations at Three Bridges, Balcombe and Haywards Heath opened on the 12th July 1841 with passengers having to complete the journey to Brighton by coach. The final section of line, the completion of which was delayed by exceptionally wet weather, was not opened until 21st September 1841. Branches from Three Bridges to Horsham opened on 14th February 1848 (the former was known as Crawley until this line opened) and to East Grinstead on the 9th July 1855. Following completion of the Quarry Line in 1900, which allowed LB&SCR fast trains to bypass Redhill station, which was owned and operated by the rival South Eastern Company, plans were drawn up to quadruple the main line from Earlswood to Brighton. The work was completed to the

north portal of Balcombe tunnel over the next ten years but the significant and expensive engineering works further south was an insurmountable obstacle, much to the detriment of today's travellers. As part of this work Three Bridges station was extensively remodelled receiving another island platform to the east and new station offices. The waiting room on this platform has sash windows with the station name in blue glass, a typical feature of the Edwardian period. In 1952 the section of line to East Croydon was signalled for colour light working and a fine large brick signal box with a raised oval central section was erected. This was demolished in 1986 when the new signalling centre built on the opposite side of the main line took over control of all signals from East Croydon to Brighton. Just over the county border at Tinsley Green TQ 286399 was the first Gatwick Airport station which opened on the 30th September 1935 and was connected to the Beehive terminal by a subway. It closed in 1958 and as members who recently visited the splendidly restored Beehive noted, all trace has now disappeared.

- Notes 1. The full story of Brighton Station can be found in Sussex Industrial History No 28, 1998.
 - 2. The Middleton Press album 'Three Bridges to Brighton' provides an excellent pictorial accompaniment, particularly of Hassocks.
 - 3. The Brighton and Hove Archaeological Society have a talk on Brighton Station on February 28th.



MICHAEL BEVAN - 1918-2003

Members will be saddened to hear of the recent death of Michael Bevan at the age of 85. Michael was Treasurer and Membership Secretary from 1978 until 1999. He had been a stalwart member of the Society from its earliest days and was also a great supporter and worker at the Coultershaw Beam Pump. His enthusiasm will be greatly missed. A full obituary will be published in the next Newsletter.

AIA CONFERENCE 2003 AT CARDIFF

Ron Martin

This year's conference took place in September in Cardiff and was well attended both for the conference proper and the subsequent visits. It is impossible to describe all the events which covered ten lectures and visits to some 40 sites within the area.

The highlights as far as I was concerned were initially the visit to the Newport Transporter Bridge where I actually walked over the top (and I have certificate to prove it !). This bridge was built in 1902-06, designed by a French engineer F.Arnodin. It comprises four steel lattice towers 245 ft. high supporting a flexible deck at a clearance of 175 ft. From this is suspended a travelling gondola with a capacity of six cars, electrically driven from an elevated control cabin. The bridge is Grade I listed and was fully restored to working order in1992-95.

Barry Docks, now almost deserted and one remaining railway line leading to Barry Island was a salutary reminder of the thriving coal port that Barry once was. The Barry Railway is a short length of preserved line with the commercial line also using the Barry Island Station.

A six mile boat trip out to Flat Holm, thankfully on a calm day, was most rewarding. This island is roughly 500 yards across and contains a most remarkable collection of IA remains. These include the lighthouse, originally built in 1737, progressively updated and still operational, the lighthouse keeper's cottage and a fog horn, both now abandoned. The latter has been restored but is not permitted to be sounded "due to Health and Safety considerations". Of military remains there are four 1866 gun batteries originally mounted on Moncrieff retractable carriages, a barrack block of 1869 and numerous WWII gun emplacements and searchlight posts. A cholera hospital of 1896, a water catchment area and a limekiln of 1790 complete the remains.

There was a 60 cm gauge tramway, no longer extant. In 1897 Marconi made the first radio transmission over water from Flat Holm to a nearby island.

The Cardiff waterside has been transformed and is very much gentrified although the Pierhead Building is still extant. The bay has been impounded with a barrage built in 1999 to create a 5,000 acre fresh water lake, provided with three sea locks and sluice gates.

The final visit I made was to the Tower Colliery in the Cynon Valley. This was originally opened in 1878 has a 1940s headframe and was much redeveloped in 1958-59. A drift with adjacent washery using screens and the floatation method of separation were also visited. The mine was the subject of a works buyout in 1994 and is still producing coal profitably.

The conference next year is being held in Hatfield between 13th and 19th August, 2004. I hope to see more of you than the six Sussex members that were present this year. Full details will be available in the New Year and will be supplied on request.

NEWS FROM AMBERLEY WORKING MUSEUM Bob Allen

After many years of negotiation and frustration work started on October 6th on the stabilisation of the De Witt Kiln on the Museum site. The kiln is a scheduled ancient monument in the care of West Sussex County Council and is important as an example of an attempt at improving the yield of lime. English Heritage have now agreed the essential work required to stop the deterioration of this large structure.

The new restaurant has opened, with a temporary access, and is deemed a great success. It is hoped that the new railway exhibition hall will be officially opened in April.

2004 marks the 25th anniversary of the setting up of the museum by the Sussex Industrial History Trust. Many events are scheduled to take place and it is hoped that next year will be even more successful than record-breaking 2003.

WORK ON THE PORTSMOUTH AND ARUNDEL NAVIGATION Chris Bryan

A group of us have been busy at four separate sites along the route of the Portsmouth and Arundel Navigation. There has been the usual site maintenance at Poyntz Swing Bridge, keeping grass cut, hedges trimmed and vandals out. Some painting was also carried out in preparation for Heritage Open Days 2003 in September.

The sites of two similar swing bridges at Barnham have now been cleared of undergrowth and carefully dug out to reveal as much of the brickwork as possible. All the pieces of cast iron belonging to Hollinsworth Bridge located at the Stewart Bridge site have been conserved by cleaning with a needle gun and painted. A further piece awaits recovery from a remote part of the farm where it had been used as a footbridge.

Another land owner at Ford has been co-operative in allowing a dig to be carried out at the first lock on the canal from the River Arun. This was after it had been noticed that a plough had hit some brickwork and the land owner was contacted. This now establishes the position where the canal joined the River Arun as a nearby marina is erroneously called 'Old Canal Basin'. Two sessions have so far revealed the lower quoin stone of the top gate and a wood sill. The land owner is prepared to leave the area so far exposed free from ploughing and as it is near to a public right of way it will be an addition to the new *Field Guide*.

THE MILESTONE SOCIETY

John Griffin

The Society was formed in 2001 with the aims:

- 1 to identify, record, research, conserve and interpret the milestones and other waymarkers in the UK and to publicise and promote awareness of milestones and other waymarkers and the need for identification, recording, research and conservation;
- to enhance public awareness and enjoyment of milestones and other waymarkers and to inform the community of their contribution to both the local scene and to the historic landscape.

The Society now produces a newsletter running to some 30 pages and has a collection of over 2000 photographs taken by the late Ken Diamond.

The Sussex Group meets twice a year in the Greyhound in Wadhurst. For details 'phone 01424 772571 or email jgriftrans@aol.com .

CANAL RECORDS IN THE SURREY HISTORY CENTRE

From an article in *Surrey History vol. 6 no. 4 (2002)* by Michael Page, Jenni Waugh and Di Stiff.

Canals

A major collection of canal documents and memorabilia came up for auction at Sothebys in November 2001 and we were very pleased to secure a fine body of material relating to the Wey and Godaiming Navigations (ref 7105) and the Wey and Arun Canal (ref 7106), which supplement earlier deposits. Among the records of the former canals, of particular note is a book providing the earliest. surviving record of the volume of cargoes on the Wey Navigation, dating from 1811 to 1821. Also of great interest is a petition of the proprietors of the Navigation to the Admiralty, probably dated to 1776, requesting that bargemen are granted protection from being pressed for service in the Navy; they lament that currently trade is stopped on the river as the men have gone into hiding. A certificate granted to a bargeman, George Wood, in November 1776, exempting him from being pressed, suggests the petition succeeded.

The Wey and Arun Junction Canal opened in 1816 but the Company went into liquidation in 1867 and the canal finally closed in 1871. The optimism attending its opening is reflected in a bill for the cost of the celebrations including 127 dinners and 128 servants' dinners, 'decorating Dinner Room at the White Hart, with the Guildford. and Arundel Arms...', and bell ringers at Guildford, Bramley and Shalford.

The purchased records also include estimates and accounts relating to / the building and demolition of windmill pumps and the only known photograph of the canal, which shows William Stanton, wharfinger, lock keeper and coal merchant, standing outside Bramley Wharf Cottage.

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The editor is indebted to Michael Leppard for sending this information.

The Sussex Industrial Archaeology Society

registered Charity No. 267159

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LATEST DATE FOR COPY FOR THE October NEWSLETTER IS 14thDectember. Copy for the Newsletter should be sent to:

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(Copy for the Mills Group section should be sent to the editor of the Mills Group Newsletter, R.F. Jones, whose address is above.)