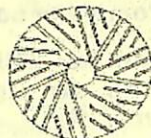




SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY



& SUSSEX MILLS GROUP NEWSLETTER 111

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Programme-Summer

Saturday 22nd September at 11.00 am (NOT 11.30 am as stated in the programme). Meet at New Romney Station TR 074249 for a visit to the Romney, Hythe & Dymchurch Railway, to include a guided tour of the engine shed. There will be an opportunity to travel on the railway afterwards. (Please note, a 15% discount is available on the All Day, All Stations fare of £9.20 on the production of your SIAS Membership Card). The Toy and Model Museum at New Romney Station can also be visited. (entrance charge payable). If you intend to stay all day, the last train to New Romney from Hythe is at 6.15 pm, and from Dungeness at 5.37 pm.

Contact Robin Jones 01323 760595

Sunday 14th October at 2-30 pm Mills October Meeting. To be held at Ifield Watermill, when all aspects of operating Mills will be discussed.

Contact Don Cox 01403 711137

Sunday 21st October at 3-00pm at Polegate Windmill. 'The Mills of Guernsey' An illustrated talk by Peter Hill.

Contact Don Cox 01403 711137

Saturday 17th November at 2-30 pm at West Blatchington Mill Barn. Annual General Meeting followed by a talk. (Subject & speaker to be announced)

Contact Ron Martin 01273 271330

From other societies.

Saturday 20th October at 10.00am at the University of Sussex, a one day conference organised by the Sussex Archaeological Society on *Sussex during the Great War*.

Contact Ian Booth 01273 405737

17th - 24th August AIA Annual Conference Fitzwilliam College Cambridge.

Contact Ron Martin 01273 271330

From Monday 24th September 2.00 to 4.00 pm *A century of Surrey motoring*, a weekly course over 11 weeks, probably at Weybridge Library.

Contact Diana Symonds 01932

847672

Sunday 14th October at Crown Woods School, Eltham, London, *Industrial Heritage Fair*.

Further information from *Industrial Heritage Fair*, 21 Riefield Road, London SE9 or telephone 0208 850 4067 (evenings)

Please let me know if your society or contacts have a meeting which might be of interest to Sussex members for inclusion in the October Newsletter. Bob Allen

Swanbourne Lake Pumphouse (Arundel)

Tony Baxter

By the combined efforts of the Arundel Castle Estates and SIAS the 1846 pumphouse has been restored. The machinery - two sets of triple vertical force pumps made by Stothert and Pitt of Bath driven by a turbine and installed in c.1900 - has been cleaned. There is a viewing gallery with information boards.

The pumphouse is now open to the public. It is located within the compound of the Swanbourne Fishpond, which is a commercial venture allowing the public to feed the young trout. This is not an ideal arrangement but is the price that has to be paid for a degree of security and to allow the pumphouse to be unmanned when open. The entrance to the Fishpond is immediately to the North of the bridge at GR TQ 019077. The public are charged 40p to go in - which includes a bag of fishfood! - but members of SIAS can enter free on production of their membership cards.

The opening days are somewhat erratic but are generally geared to school holidays. The owners aim to open every weekend and bank holiday throughout the year and every day during all school half-terms and holidays - though this depends very much on the weather which therefore tends to restrict winter openings. The opening times are from about 11am to about 6 pm. If the weather seems doubtful it is best to telephone the owners beforehand - The Chalk Springs Fishery, 01903 883742.

Special IA visits by small parties can be arranged by contacting either Michael Palmer (01903 505626) or Tony Baxter (01903 201002).

A Walk Around Industrial Kingston and Southwick Jones

R o b i n

It is always gratifying to go on a walk conducted by somebody who knows his subject and on the 12th of May 17 members were just so treated when Trevor Povey took us on one of his highly informative walks around industrial Kingston and Southwick.

Starting from the car park in Southwick we progressed past the site of Manor Farm and then along Southdown Road past the site of the former brewery of Richard Tamplin destroyed by fire in 1821 with a reputed uninsured loss of £10,000, a wall of which survives.

Reaching the Green, Trevor advanced his theory that this was once a tidal inlet from the sea from which King Charles II made his escape. The area had recently been flooded and temporary pipes were in place to keep the rising water table level in check. To the north was noted a WW1 army accommodation building now a hall.

Continuing westwards along Park Lane then southwards down Kingston Lane we passed under the original 1840 railway bridge noting the old marker showing the border of Southwick with Kingston. Braving the traffic the harbour entrance was viewed together with the lighthouse, reputed to have been the model for that included on the old Victorian penny.

Retracing our footsteps eastwards along Albion Street we viewed Turberville Wharf and the gap between the houses west of No. 17 where the temporary railway passed on its way to the site of the building of the WW1 "Mystery Towers". These had been intended as defences against enemy submarine but were incomplete at the end of the war. One became the Nab Tower off Portsmouth. The former wharf to the south of the Custom House was then visited and the lock gates viewed from a distance.

Progressing east again we walked past the old Southwick Town Hall and then back past the former shipbuilding yard of Courtney & Birkett. There had once been a saw pit here. This company had built the "Steep Grade Railway" at the Devil's Dyke. Passing the Sussex Yacht club's premises that had been built as Vallance's malthouse our tour was completed by turning northwards under the railway bridge station to the "Ship" where a few members slaked their thirsts.

Sadly so often Trevor prefaced his information with a comment like "here once was". There is no trace of the Grune Company who manufactured liquid filled lenses that enabled photographs to be taken in very poor light nor the business of Ripley the postcard photographer. It is hoped that one day Trevor will commit his vast knowledge to paper as it is vital that this part of social and industrial history is not forgotten. Thankyou Trevor for a very entertaining and instructive afternoon.

On Saturday 28th, April 17 members assembled at the BT Museum, which is housed at the Steyning Telephone Exchange in Bramber Road. Two members of the Museum, Alec and Bob greeted us and split the party in two. One group went with Alec into a room which contained a wide range of telephone handsets from the earliest type to mobile phones. Alec explained the history of only a small selection, due the vast number of different types on display. They ranged from examples where the mouthpiece is separate from the earpiece, through to those used in the 1920s and 1930s up to the present day, including the Trimphone. Payphones, including those with the A and B buttons were also on display.

A Wheatstone Bridge, complete with desk, which came from Taplow, was demonstrated. Other exhibits in this room included a reconstruction of a typical early Post Office counter, with life size dummies. Also there was a life size dummy at the top of a telegraph pole, which was fitted with wires and insulators. Alec gave a further demonstration of a dialling sequence between two telephones, and the equipment which activates this was seen working. A number of associated items connected with telephone operation was also on display, including some early batteries.

The groups then swapped over and Bob showed us round the exhibits in the next room, which contained teleprinters used in the BT Telex service, telephone switchboards and a reconstruction of a "hole in the road". A number of teleprinters were seen as well as tape punches and readers, used to create the printed messages. The reconstructed hole in the road was fascinating and included various tools and examples of cables. This gave Bob the opportunity to explain the different types of cable construction, from the earlier colour coded varieties to the latest, using fibre optics. Nearby a number of measuring instruments were seen. Finally the range of reconstructed telephone switchboards from various dates were explained and some were demonstrated.

Between the two rooms a small area was devoted to street furniture, including a red telephone box, an early police box, a wall mounted letter box and telephone circuit boxes.

At the conclusion of the visit it was mentioned that this collection, some time in the future, will move to the Amberley Working Museum in the new building to be built to house the National Communications Collection, as reported on page 19 of the last Newsletter.



This visit was arranged as a follow up to Ron Martin's winter lecture reported in the last Newsletter. Kings Standing at TQ 476292 in Ashdown Forest was set up during WWII for transmitting subversive propaganda to Europe. Rodney Ash of Sussex Police who now owns the site outlined its history and conducted us around the site. The main transmitter was obtained from the USA in 1941 and was believed to be the largest in the world and was nicknamed Aspi(distra) after the Gracie Fields song. The huge underground bunker was dug in some six weeks by a team of Canadian Engineers stationed nearby who were provided with unlimited free beer. The first broadcast was made in November 1942 and to test whether broadcasts were being received in Germany a false message informing that "due to harsh weather conditions at the Russian front our brave soldiers need blankets etc which should be taken to the nearest police station" was transmitted. The result was apparently successful.

A complex of buildings for additional transmitters together with a power house was built on the site during the war and immediately following when the transmitters were used for the Diplomatic Wireless Service. A particularly interesting building is known as the cinema building constructed in 1942/3 to house two transmitters and a control room above. The curved staircase to the upper floor is lined with terrazzo and has a deep coved cornice with gold decorative bands, whilst the erstwhile control room has a wood block floor and concealed lighting all now somewhat dilapidated but redolent of an Art-Deco cinema. Why this lavish design was used during a time of war is somewhat of a mystery; two not very convincing theories were postulated namely that the Chief Engineer Harold Robin was a cinema buff or the "architect" a Cecil Williamson had been "involved" with cinema building before the war.

In the eighties with the threat of destabilisation of the USSR the original bunker was gutted and rebuilt as one of seventeen Regional Seat's of Government for use following a nuclear attack. Unaltered other than removal of furniture (bunks and wardrobes for fifty "personnel") it proved an atmospheric return to recent history. Our thanks to Ron for organising the visit.

Air Raid Shelter at No.9 Roedean Crescent, Brighton Ron Martin

The house was built in 1937/38. Recent work at the back of the house has revealed an air raid shelter but as the foundation of the house intersects the staircase leading to the shelter it suggests that this pre-dates the house. There was an earlier house on the site in 1935, but the original plans show no sign of the shelter, which is completely underground, 10 ft square, with the blocked entrance passage from the house and two other passages leading to escape hatches. The shelter was well finished with a wood block floor, plastered walls, electric lighting and power. It also contains an apparatus described as an "ARP PLANT" and manufactured by Keith Blackman Ltd., Engineers of London. This apparatus was an air purification plant and was not installed until 1940 but by whom is as yet unknown.

SERIAC 2001. 31st March 2001.

Pat Bracher

SERIAC was hosted this year by SIAS and the venue was the beautiful theatre at Christ's Hospital where some 200 delegates from all over the region met in the early morning.

After a welcome by our President, Sir Frederick Sowrey, John Silman described the diverse restoration projects which have been carried out by SUIAG, which included water pumping equipment, a rare sewage pump, water mills, roller mills and their current project, a wind pump at Warminster.

The morning was brought to a close by Nick Plumley, the Curator of Christ's Hospital Museum, with an informative talk on the history of Christ's Hospital, founded in London in 1553 and transferred to Horsham at the end of the 19th century.

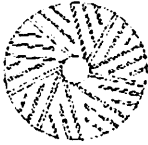
After lunch Denis Smith, chairman of GLIAS, told us about the six major London exhibitions which have taken place since 1851, showing us the ingenious engineering used to build these impermanent structures, from the Crystal Palace to the Millennium Dome. He pointed out that the theme running through all these buildings was the dome in some form. Although these exhibition buildings had such brief lives they have all left some mark on London, including the South Kensington museums, Wembley Stadium and the Royal Festival Hall.

Christopher Sugg, of Sugg Lighting Limited, and descendant of the early 19th century founder of the firm, gave a brief history of methods of lighting. In particular he told us of the development of gas and gas street lighting and showed us some of the elegant lanterns still made by his firm in Sussex and in use all over the world, most now powered by electricity. The lanterns on both Buckingham Palace and the Houses of Parliament gates are still lit by gas, as are some lanterns imported into Japan along with the gas to light them.

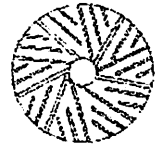
Our last speaker was Alan Crocker. The Waltham Abbey Royal Gunpowder Mills should have been opening to the public for the first time this Easter but this has been postponed due to the outbreak of foot and mouth disease. However, all those who heard this lively talk will be looking forward to the day when we can wander about this fascinating site, restored with a Heritage Lottery Fund grant, which has 231 listed buildings, an SSSI and is a Scheduled Ancient Monument. Professor Crocker told us of the ingredients of gunpowder (none who heard him will forget his calculations for obtaining saltpetre from pigeon droppings), the methods of mixing gunpowder and the development of different types of explosives. Waltham Abbey ceased to produce gunpowder and became a research establishment in the 20th century.

Our day closed with the news that a SERIAC bursary has been awarded to the British Engineerium to produce a report on the Éolienne Bolleé at Cowfold. This is a unique wind engine for pumping water (see Newsletter No. 102, April 1999, for details).

I should like to thank all those who helped to organise this most interesting day for their hard work, and Christ's Hospital for their hospitality.



Sussex Mills Group



Edited by Robin Jones

Sussex Mills Group is part of the
Sussex Industrial Archaeology Society

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EDITORIAL

Robin Jones

First, my apologies for giving the incorrect dates for the National Mills Weekend in the April Newsletter. I hope many members visited the Mills which were open that weekend. I was in North Wales during the Mills Weekend, and a report on my visit is given later. As can be seen in the **NEWS OF MILLS** section, only five mills are mentioned. Any contributions about activities of other Sussex mills are always welcome. Don Cox has reported that a national mill Archive is being set up by Ron Cookson. It is hoped that this will give access to collections of information on mills via the internet. The Sussex Mills Group supports this scheme, and any comments on this would be welcomed.

DATES AND EVENTS

Sunday 14th October at 2.30 pm. Mills October Meeting. To be held at Ifield Watermill, when all aspects of operating Mills will be discussed.

Sunday 21st October at 3.00 p.m. at Polegate Windmill. 'The Mills of Guernsey' An illustrated talk by Peter Hill.

NEWS OF MILLS

Polegate Windmill

Robin Jones

A new exhibit on display on the wall in the Education Room of the mill is a large coloured map of Sussex, 8 feet by 4 feet, showing all the Windmills and Watermills listed in the recently revised Sussex Windmills and Watermills Leaflet. At the exact location of each mill is a red light. Below and in front of the centre of the map is a rotating drum with details of each mill showing through a glass window. When the drum is rotated by a visitor, details of a mill are revealed which in turn illuminates the appropriate red light at the location of the mill on the map. The display was initiated by Lawrence Stevens from an idea based on a similar exhibit in a South London Museum. The complete display was made by Eric Feasey, a volunteer at the mill.

The strengthening of the two beam ends under the Stone floor has now been completed. One of the two bevel gears connecting the drive from the great spur wheel to the layshaft on the spout floor, which drives various machines, including the underdrift pair of stones installed in 1862, has been replaced. As these stones will be used for grinding, it brings this possibility one step nearer.

Stone Cross Windmill

Robin Jones

Since National Mills Weekend the mill has been open to the public on Sunday afternoons from 2 pm to 5.30 pm. During that weekend, 200 visitors passed through the mill who contributed £300, despite there being no entrance charges.

Although the mill was completely restored by IJP, two pieces of internal machinery were not included in the restoration work. One of the items was the flour dressing machine located on the stone floor, and the other item was a rare balance dish, which is an automatic grain feed arrangement to the hopper. The balance dish is in a poor state, but restorable. It is basically a wooden trough with the lower half covered by a metal sieve. Above the sieve in the upper half of the trough are pivoting boards across the trough width, spaced at intervals, similar to shutters seen on sweeps. In its correct position, the trough is set at an angle under the bin spout feeding the hopper of one pair of stones, together with a funnel in the hopper. When the funnel empties, the trough rises and opens a trap at the top of the sieve. The grain then runs down, is sieved and flows into the funnel, which falls, shuts the trap and is again gradually emptied as it feeds the stones. In the balance dish at Stone Cross, most of the metal sieve has gone, although the majority of boards are in place. A similar arrangement was fitted in Friston Post Mill, Suffolk and is described on Page 143 of 'The English Windmill' by Rex Wailes. It is hoped to restore these items in the near future.

Michelham Priory Watermill

Robin Jones

When I visited the mill on Saturday June 9th, it was grinding. It was interesting to see the waterwheel turning and watching the machinery working inside the mill. There are 8 millers available at the mill, with three of them on duty when grinding is in progress. Currently extra days are now allocated for grinding to cope for the high demand of stoneground flour being purchased by visitors. With respect to the fabric of the mill building, work will start soon on painting or treating the weatherboarding on the front of the mill.

Jill Windmill, Clayton

Robin Jones

From the Summer 2001 issue of 'Remolo' the Newsletter of the Jack and Jill Windmill Society.

Jill Windmill is fully open again following the foot and mouth epidemic. At the AGM of the Society in April, members were shown the final chapter in Danny Jarmann's series of restoration films. In early May, the fantackle was inspected and refurbished. A number of new bearings have been fitted in the lower horizontal shafts, which involved raising the whole assembly on a jack to gain easy access to the carriage wheels. An opportunity was also taken to clean and grease the axles. It was also reported that the wooden stock has been cleaned and the first coat of paint applied.

Lowfield Heath Windmill

Don Cox

Peter James is now Chairman of Lowfield Heath Windmill Trust. The adjacent zoo has now been sold and will not open to the public. The Trust is in discussion with the new owners concerning the use of the field around the mill who are very supportive.

MILLS ON THE ISLE OF ANGLESEY

Robin Jones

On National Mills Day, Sunday 13th May, I was in North Wales, so I decided to visit Llynonn Mill (or Melin Llynonn in Welsh), which is near Llanddeusant on the Isle of Anglesey, and is the only working windmill in Wales. The mill is open every day except Mondays, but I selected this particular day as I expected extra activities to be taking place and perhaps see the mill working. I was rather disappointed as although the steward at the mill was aware that this Sunday was a special day, no extra activities had been arranged, neither was the mill working. However on arrival at the mill, I found it was prominently positioned in a rural area and located adjacent to it was a tea room and craft shop.

The windmill is a white stone tower mill with common sweeps, 4 storeys high and was built in 1776. In 1918 a severe storm damaged the mill. It was not until 1978 that the mill was bought by Anglesey Borough Council with a plan to restore the mill to working order. This was achieved in 1986 when it was reopened, and now produces stone ground flour for sale, presumably during the week. Two features were observed during my visit, one was that the grey coloured set of millstones seen on the stone floor, one of three pairs, were Welsh stones, not Derbyshire peaks, and there was no fantail fitted to the boat shaped cap of the mill, the cap being turned by operating a large wheel positioned on the outside of the cap.

About a mile from the windmill was Howell Watermill, which was not open on the day of my visit, although it is a working watermill. According to records there has been a watermill at Howell on the River Alaw for at least 650 years. The present mill was extended in 1850 and contains three pairs of stones, which are powered by an overshot wheel.

To the north of these two mills can be seen the Llyn Alaw Wind Farm, a collection of 34 turbines built in 1997. It is one of three wind farms on Anglesey which together produces enough electricity to supply 14,000 homes.

SUSSEX AND SURREY MILLS SOME COMMENTS ON THE LITERATURE, PART 2.

Michael Yates

Turning now to Sussex watermills, Gregory and Martin ⁽¹⁾ say that Bolney mill was of brick or stone construction. A real photograph postcard of about 1905 shows at least one gable end to have been weather-boarded. They describe Coolham Mill as having a lucam which is shown on Gregory's drawing of it although a real photograph postcard from about 1905 does not show this. A pre 1907 postcard of Wanford mill shows it as having a sack hoist pulley with a first floor loading door beneath, neither of which are shown by Gregory and Martin. The small metal wheel shown in the gable end of Gregory's drawing of Horsted Keynes Mill is not shown on any of the 1905-1920 postcards of this mill (was it a later addition for an auxiliary power source?). The tower on Fletching mill, said by Gregory and Martin to have been used to view the cricket matches in Sheffield Park, is shown on a pre 1905 postcard as having a balustrade around it, probably a safety aspect.

Stidder and Smith ⁽²⁾ comment that Crowborough New Mill was being worked from 1903 for some time by Charles Colbran and that it was steam assisted. Postcard photographic evidence from before 1908 shows it as an overgrown mill with substantial damage to the lucam and the wheel house suggesting it had stopped work sometime before this latter date. They describe Shortbridge Mill as a listed three storey redbrick building although their photograph of it and an undated postcard show it to have been weatherboarded above a brick base. An early card of High Hurstwood Mill (c1910) shows a similar view to that in Stidder and Smith but does have one of the small group of buildings as well (possibly a

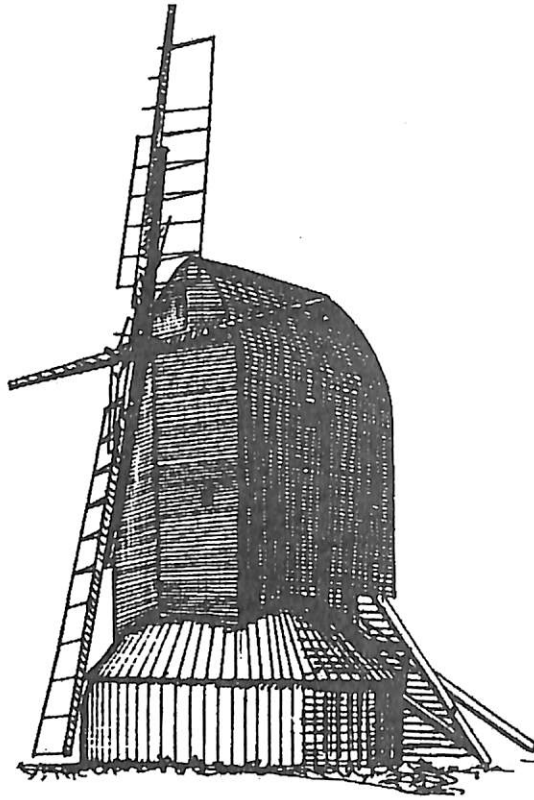
although their photograph of it and an undated postcard show it to have been weatherboarded above a brick base. An early card of High Hurstwood Mill (c1910) shows a similar view to that in Stidder and Smith but does have one of the small group of buildings as well (possibly a granary and cart shed). Another photographic postcard in my collection shows Horsebridge Roller Mill with the message on the back saying "This is before it was burnt down". The mill in the picture bears little resemblance to that in Stidder and Smith and it thus probably dates to about 1906~1908, i.e. before the second fire there. It shows a four storey brick building under a tiled roof standing across the millstream. The chimney for the steam engine is to the right of the mill and the rack and pinion sluice gate can also be seen.

Back to windmills and into Surrey now where Farries and Mason ⁽³⁾ describes the cap of Wray Common Mill, Reigate as being of the rare conical type. Photographic postcards of this mill from the late 1800s early 1900s show that the cap of the working mill was the ogee type and that this was replaced in about 1907 by the conical cap, the shape that it has remained since. Probably the most glaring error I have come across in the literature is that by Mary G. Goss (4) where she says, under a reproduction of a postcard showing the substructure of Reigate Heath post mill "Inside the Chapel. The central post has been cut away but the massive side beams remain".

I am sure there are many more errors and omissions in the literature relating to the mills of Sussex and Surrey and I hope to be able to produce another article like this in the future. In the meantime a plea for help with a query I have not been able to answer. In Coomber's "Bygone Corn Mills in the Horsham Area" ⁽⁵⁾. Plate 1 shows "The Town Mill in 1849". The reproduced photograph is taken from a pre 1910 postcard (no publisher's name) titled "Horsham, Old Town Mill 1849". Accepting that it shows the Old Town Mill before its rebuild in about 1867, can anyone confirm whether 1849 is the date of the picture and not the postcard number? 1849 is a very early date for a photograph and if it is actually the date then the original must be a very rare and historic photograph.

1. "Sussex Watermills", S.B. Publications 1997
2. "Watermills of Sussex", Vol 1, Baron 1997
3. "The Windmills of Surrey and Outer London", Charles Skilton 1966
4. "Reigate and Redhill", Chalford 1995
5. "Bygone Corn Mills in the Horsham Area. Horsham Museum Society 1996





RODMELL MILL © R.G. Martin
from photo by E. Lancaster Burne

LOST WINDMILLS OF SUSSEX

Guy Blythman

RODMELL POST MILL TQ 412053

A windmill stood here in the Middle Ages according to the Victoria County History. The mill with which we are principally concerned was built in about 1801 on "a plot of land containing about 30 rods situate in the south-west part of Whiteweed Furlong in Rodmell", according to Simmons who does not give the source for this information. Gurney Wilson was shown a timber from the demolished mill, which was dated 1745, but this could of course have come

from elsewhere.

On 16th June 1810, the owner John Fuller, sold the mill for £700 to John Glazebrook. During a violent storm late in 1825, the crowntree was struck by lightning, which then passed down the main post to the ground, but the mill was not seriously damaged. A year later, in December 1826, John Glazebrook died and was succeeded by his son William who remained at the mill for some 50 years.

On 24th June 1877, William's executors sold the mill to Jacob Verrall, and it remained in the latter's possession until 26th December 1911, when he in turn sold it to a George Skinner who had been his tenant since 1902. Skinner's predecessor was a man named Westgate, one of whose favourite sayings was "There was a time when a windmill would keep a wife and family"

George Skinner and his two sons pulled the mill down on 12th January 1912. It had for some years been in only occasional use, and was in poor condition. After demolition, the machinery and main timbers were sold to Messrs. H. and E. Waters of Forest Row.

A number of accidents occurred at the mill during its working life. The Sussex Weekly Advertiser of 29.9.1817 reported while working in his father's mill the 14-year old son of Mr. John Glazebrook (presumably William), had fallen through one of the sack trapdoors and broken a thigh, but was thought likely to recover from his injury. On Wednesday 15th January 1871, a boy named James Deadman was playing outside the mill, where his father was miller, when he was struck by one of the sweeps. Fortunately he did not live up to his name, but his right arm was broken and his head severely injured. However the Sussex Advertiser reported that he was progressing favourably. In May 1886, a 9-year old girl named Katie Thorpe was hit by a sweep while searching under the mill for a missing pencil case and suffered a fractured skull. She was taken to the Lewes Infirmary the next day; I have no details as to her fate.

The mill was a white one with a wooden roundhouse supported on small brick piers as at Burwash (Rockill Mill), Warbleton (Summerhill Mill) and Heathfield (Sandy Cross Mill). Like many built in the eighteenth or early nineteenth century, it originally has four common sails, which were later replaced by patents, the striking wheel for which was located on the left side of the tail. The windshaft, brake and tailwheels were of wood. The sack hoist was driven from a separate wheel mounted on the windshaft, with a universal joint, so that it did not have to be raised to engage it. There were two pairs of stones, a flour machine, a jog scry and a smutter. The bridgetrees in the breast were of iron, while those in the tail were of wood. Originally the mill was entirely of oak, but later a new breast of pitch pine was put in. Latterly most of the millwrighting was done by Medhurst's. The site of the mill is close to the village on a bank well above the road, which becomes the steep and narrow approach to Mill Hill. The spot on which it stood is marked by a clearing.

NOTE. Most of the technical information which is given above was supplied to Simmons by Mr. R. Hawksley.

Letter from Brian Malaws from Ystrad Meurig, Ceredigion, Mid Wales.

I own a former corn mill devoid of any machinery and I am currently restoring a waterwheel with the intention of mounting it in the wheelpit and running it by water power, possibly to generate electricity.

The wheel is fourteen feet in diameter and three feet wide; the shrouds and hubs are cast iron, the axle and spokes were wooden and the soleplates of sheet iron. The buckets were originally wooden, the two boards forming each bucket being 14 inches and 6 inches wide by 1 ¾ inches thick. Although I have replacement axle, spokes and soleplates in the original materials, I am unsure what to use for the buckets. Originally these would have been elm boards, which are now difficult to obtain. There has been much debate in the Welsh Mills Society on the merits of various types of timber, with no satisfactory conclusion reached.

I have discovered that there is a material called "Plaswood" which consists of recycled black polythene silage bags moulded into planks and other sections.

A sample piece of plank, 1 ¾ inches thick, indicates that it is a very strong and dense material that can be cut with a saw, and being plastic should be distortion free and durable. When fitted to a waterwheel the material will be virtually indistinguishable from timber.

Has anyone had any experience of this material, either in use as I have suggested, or in any other use, or has anyone considered this material but rejected it for whatever reason?

(Please send any replies to the Editor for forwarding on to Brian Malaws)

Sussex Mills Group

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(01273 776017)

Secretary D.H. Cox 3, Middle Road, Partridge Green, Horsham RH13 8JA
(01403 711137)

Committee	A. Brown	M. Chapman	E. Henbery	P. Hicks
	T. Martin	A. Mitchell	B. Pike	S. Potter
	R. Potts	L. Stevens	T. Ralph	

Croydon's Tramlink

Paul W. Sowan

Industrial archaeologists may like to have two reasons to come to Croydon to ride on the town's new trams, apart from the system's own inherent interest.

1. The Croydon Natural History and Scientific Society, with Heritage Lottery Funding and sponsorship and support from Croydon Council, Nestlé's, and Wates, presents a 'Museum without Walls' at selected tram stops within the Borough. Displays will feature objects and documents in the Society's and Croydon Libraries' collections relevant to the chosen stops. Naturally enough, transport and industrial history will be prominent themes, alongside archaeology, geology, and general local history.

It is hoped that other Societies and neighbouring local authorities may extend the scheme beyond the Croydon Borough boundaries.

2. The Woodside & South Croydon Railway (all two and a quarter miles of it) was built, during 1881 - 1884 by the contractor Joseph Firbank, who is more famous for his work on one of the contracts on the Settle - Carlisle line. It contains three of Croydon's four railway tunnels (the fourth is at Riddlesdown on the Oxted line, still used by trains.) The line was closed as a railway in 1983, but Croydon's Tramlink now takes passengers through all three of the WSCR tunnels between the Sandilands and Lloyd Park stops.

The three short tunnels on the WSCR are of exceptional interest, as they pass under a single hill. At the north and south end are ordinary tunnels bored through, respectively, mostly London Clay and Thanet Sand, and brick lined. The central tunnel, however, of a different profile, is a cut-and-cover tunnel running along the floor of a very deep excavation made from the centre of the hill (the tunnel roof is currently used as a rifle range by a local club. It has yet to be settled whether the Park Hill tunnels were designed from the outset to be as they are now, or whether only one long tunnel had originally been intended.

What is known, mostly from field observations made and published by geologists from the Croydon Microscopical & Natural History Club, that the civil engineering of the tunnels was exceptionally problematical, the middle of the hill being largely loose pebbles, running quicksands, and similar challenging tunnelling media!

It was as a result of the geological interest of the Park Hill section, and the discovery of several fossil species new to science, that a number of detailed published descriptions of the civil engineering problems survive. The fossils included mammal bones, *Coryphodon croydonensis* named after the town, and a gigantic bird *Gastornis klaasseni* named after the local geologist Hendericus Martinus Klaassen who discovered it. The Transactions of the Zoological Society might not be the most obvious place to search for civil engineering history! Further exciting palaeontological discoveries, yet to be published, resulted from more earthmoving to make the junction near the Sandilands tramstop.

Partnership with local naturalists continues, as badgers set up home in the tunnel approach cuttings, and in the central cutting (above the central tunnel roof) after the last trains ran, and the Joseph Firbank Society, under license from the tramway operator, has its Joseph Firbank closed nature reserve in the northern and southern cuttings, members periodically monitoring the badgers' setts. There is no public access however other than as tram passengers.)

Dunford House water supply pumps

Dunford House was occupied by John Cobden during most of the nineteenth century and meticulous accounts were kept during his lifetime, none of which mention the pumping system. After his death in 1865 a water supply system was installed taking water from Coster's Brook, a tributary of the Western Rother. The system was powered by a 10 ft diameter high breast shot iron wheel which took water from a leat. Adjacent to the wheel pit there was a pump chamber containing a small triple-throw pump which seems too small for the power of the wheel. A later separate pump chamber contained a larger set of pumps, took the drive from the wheel by a gear wheel and a long shaft passing through the earlier pump chamber. The buildings are all derelict and much of the pumping equipment has been destroyed but there is sufficient left to enable interpretation to be carried out. It seems likely that there was an earlier set of pumps now destroyed in the first pump chamber which was subsequently replaced when the later pump chamber was built.

West Blatchington Mill tower

A recent survey has been carried out to determine the probable dates of construction of the tower and barns of the mill. Various details indicate that the tower was originally built as a free-standing structure, probably in the eighteenth century with open arched openings on all four sides at ground level and two high level access doors. What the function of this tower was is undetermined but a safe store seems to be the most likely use. The fact that the external distinctive brick quoins are extant to a low level confirms its probable isolated location when built. Subsequently the adjacent barns were erected and in the early nineteenth century the circular cast iron windows were installed. Their location suggests that the barns were already in position when the windows were installed or were contemporary with them. The first mill on then site was built in the 1820s and this was shown on the Constable sketch of 1825. No mill was apparently extant in 1829 as presumably the earlier one fell down and the present mill was built in 1833.

Members evening, at Seven Sisters' Country Park**Ron Martin**

This meeting which had been transferred from Brede due to the Foot and Mouth problems, was attended by a disappointingly few 20 members. Bob Allen spoke about the gravel extraction industry in the Cuckmere Valley little of which is now visible, but which ultimately had the effect of preserving the valley as an open space.

John Walter talked about the Éolienne Bollée at Parkminster which is being investigated by students of the University of Brighton in conjunction with the British Engineerium. He outlined the history of this French invention, patented in 1868 by Ernest-Sylvian Bollee and showed us slides of various examples still extant in France. The Parkminster example is a small one with a rotor diameter

of 2.5 m. The principle by which the system works is that of a wind turbine with two sets of vanes, one fixed and one rotating, the drive being carried down the centre of the supporting columns. One characteristic feature is the circular staircase around the central column. At Parkminster the vanes have all but disappeared but the central column and staircase is still intact. At the bottom of the column the drive turns through 90° and a horizontal shaft takes the power to a set of water pumps. Although restoration in situ is the desired option, it is not practical for this to happen and removal seems inevitable.

Lawrence Stevens from the Eastbourne Natural History and Archaeology Society gave us the background to an investigation which his Society is shortly to carry out in the Wannock Valley at Polegate where there were several water mills in the nineteenth century.

Ron Martin talked about several projects he is currently involved in and these are reported separately in this Newsletter.

John Blackwell concluded the evening with a description of the many remains of railways and industry around the Kings Cross area of London, which are all likely to be demolished in the near future to accommodate the forthcoming Channel Tunnel Rail Link terminal.

SUSSEX BRANCH LINES – A YEAR 2000 SURVEY John Blackwell

6 RAILWAYS TO EAST GRINSTEAD

The first branch to serve East Grinstead was from Three Bridges on the LB&SCR London - Brighton main line. It opened on 9th July 1855 and was extended to Tunbridge Wells (West) opening on 1st October 1866. A third arrival from the south started at a junction near Barcombe Mills on the Lewes – Tunbridge Wells branch commencing operations on 1st August 1882. The fourth line to this Sussex crossroads was from Oxted to the north opening on the 10th May 1884. British Railways planned to close the East Grinstead - Lewes line in June 1955 but a local resident, a Miss Bessemer of Chailey, discovered that closure required Government authority and a service lingered on until 16th March 1958. In December 1959 the fledgling Bluebell Railway took over part of the line and the rest, as they say, is history. The final west to east service ran on 1st January 1967 leaving East Grinstead, the home town of Dr. Richard Beeching, architect of the closure of most of the rural lines, at the end of a single but still operational branch from London via Oxted.

The branch from Three Bridges commenced in a bay platform on the east side of the station now covered by the signalling centre. The alignment has been preserved, except where modern housing and roads have made some incursions, to East Grinstead as Worth Way a bridle and cycleway. In the undergrowth can be found reminders of railway use such as the small concrete posts to which were fitted pulleys for the signal wires. Rowfant station at TQ 325367

was the only intermediate station when the branch opened, the building remains in good condition with windows and doors boarded up. This attractive single storey structure had lattice windows, decorative bargeboards, and a shelter at the west end for the use of the coachman from Rowfant House when awaiting his employer. An adjacent notice board has photographs of the site in steam days. At TQ 335370 a brick bridge over the road survives. In 1860 a station with the lengthy name of Grange Road for Crawley Down and Turners Hill (latterly shortened to Grange Hill) opened at TQ 346374. The location, diagonally opposite the Royal Oak public house is now houses and shops. The line originally terminated in the centre of East Grinstead at TQ 392382 near the present road junction of London Road and Railway Approach. The stone station house although altered and extended can still be seen. A second station was built in 1866 when the line was extended to Tunbridge Wells (West) to the north of the original to allow the line to pass under London Road. Its site is now a part of the A22 and aptly named Beeching Way which follows the alignment out of East Grinstead. With the arrival of the line from Lewes in 1882 a new station 300 yards to the west was opened, this was in effect a double decker station with the Three Bridges - Tunbridge Wells West line above, the high level, crossing at right angles to the Lewes line and its later northward extension to Oxted, the low level. In 1969/70 the high level platforms were demolished along with the magnificent low-level buildings to be replaced with the present ghastly CLASP building. The point where the high level line crossed can still be discerned. Outside East Grinstead the alignment takes to the country becoming the Forest Way a bridle way to Groombridge. Forest Row station at TQ 428352 was the first station eastward and remains of the platforms and the goods shed can be discerned in a mix of later light industrial buildings. An interesting survival at the head of Station Road is a coal merchant's brick built office long disused. Hartfield Station at TQ 480361 survives in use as a nursery school as does the stone built bridge taking the B2026 over the line. Here the goods shed is occupied by a coal merchant. Withyham Station at TQ 499364 is now a private house. All three stations were brick built with a two-storey station house and single storey booking office with canopy. This simple style was favoured in the 1860's by the cash strapped LB&SCR and can be compared with opulent style of the East Grinstead-Lewes line of the 1880's surveyed in number 3 of this series in October 2000. From Withyham the line continued to Groombridge before terminating at Tunbridge Wells (West) described in number 2 of the series.



A Plea from the Membership Secretary

Peter Holtham

Several members have still not paid their subscriptions. The rate is £10, plus £5 per family member. Can all outstanding payments be paid as soon as possible, please?

'Poyntz Bridge will be in use and have public access for the day on Sunday 9th September 1000 to 1600 for Civic Trust Heritage Open Days 2001'.



Industrial Archaeology on the Web

Martin Snow

I would like to draw attention to or remind members about our web site at:
<http://www.sussexias.co.uk/>

For Coultershaw Pump there is now a dedicated site at
<http://www.coultershaw.co.uk/>. This is developing and I would appreciate input. There is also a web site at <http://www.icehouses.co.uk>. This is another web site which is being developed.

The Sussex Mills Group have a web site at <http://www.sussexmills.co.uk>. At present this particularly contains material from the Sussex Mills Group, but will have a lot of mills material and links. Please note I am putting the Lost Mills sections onto the web site.

I am setting up a SIAS discussion group, on either yahoo or smartgroups. If you log on to the [sussexias](http://www.sussexias.co.uk) web site you will find instructions for joining this electronic discussion group. By joining [Sussexias](http://www.sussexias.co.uk), you will be able to exchange messages with other group members.

The Sussex Past discussion group has recently had discussions about aspects of local industrial archaeology such as Brighton trams and tram shelters. To receive items from this discussion group log on to <http://www.sussexpast.co.uk>. Sussex Past is the trading name of the Sussex Archaeological Society. The Society hosts the Local History Forum, a non technological (real people!) meeting to discuss all matters of local history including Industrial Archaeology.

You may e-mail me at martin@snowing.co.uk



The Sussex Industrial Archaeology Society

registered Charity No. 267159

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LATEST DATE FOR COPY FOR THE OCTOBER NEWSLETTER IS 14th SEPTEMBER

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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.)

NEW SIAS website : www.sussexias.co.uk

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