



Sussex Industrial Archaeology Society

Newsletter

Number 168

October 2015



A contingent of the AIA conference delegates visited the unique water catchment in Stanmer Park as part of one of the tours of numerous IA sites by vintage Green Line coach.

The site has recently been cleared of undergrowth and trees, making the concrete and former filter tank visible (at bottom of picture).

An article on the water catcher will be featured in a future *Newsletter*.

(Peter Stanier)

Newsletter 168

Contents

October 2015

Editorial	2
Forthcoming SIAS Events	3
Events from Other Societies	4
The AIA in Sussex 2015	5
Visit to Selsey	10
Visit to Burseldon Brickworks Museum.....	12
Visit to Shoreham Port.....	18
Southdown 100	20
Phoenix rising – The rebirth of <i>Selsey Pavilion</i>	24
Mystery Photo and Update	26

Editorial

Welcome to *Newsletter 168*. A bumper bundle for members this quarter, not only your usual *Newsletter* and one from the Mills Group, but the annual *Sussex Industrial History*. In addition there is a copy of the *Gazetteer*, prepared and produced for the AIA Conference. For over two years, I have been busy with John Blackwell, Peter Holtham and other SIAS contributors, researching, editing and photographing many of the IA features of our county. Space dictated that some sites had to be omitted (maybe your favourite), but fear not, we plan to place a fuller Field Guide online after a well earned rest!

After two years of preparations the AIA conference has now over and those involved may have recovered by the time you read this. Thanks are due particularly to Malcolm Dawes who had a few(?) disturbed nights, the A27 disaster at Shoreham meant a last minute change as it was not possible to visit the airport with a coach.

One of the AIA talks was on the IA of the cell phone, something we tend to ignore, the earliest masts and equipment have gone already, another topic for the field guide? It reminded me of an internet group *motorway steps* dedicated to those mysterious steps that go up embankments. The group is no more, but it is surely a topic in need of further research and recording.

There is an edited version of the AIAs report on the conference in this *Newsletter*, Thanks to the AIA News for the text and images

We are now into the winter season of talks and you will see these listed opposite.

As always the Committee invite your suggestions for visits in 2016.

Forthcoming SIAS Events

Malcolm Dawes

All meetings are held at West Blatchington Mill Barn, Holmes Avenue, Hove

Saturday 24th October at 7.30pm. *Pottery, Bricks and Tiles in and Around Burgess Hill*

Curator of Burgess Hill Museum and SIAS member Fred Avery relates the story from the days of the early nineteenth century potteries and brickfields through to the final days of the Keymer Brick and Tile Works, which in its heyday employed more than 300 people. Millions of bricks have been made there since 1875 and in the past 35 years over 100 million tiles have been sold in the U.K. and exported worldwide. The works closed in 2014 and the 50 acre site will be redeveloped in stages to accommodate 475 houses.

Saturday 14th November, 2.00pm. AGM of the Sussex Industrial

Archaeology Society (The notice of the AGM is included with this Newsletter, please contact the General Secretary if you need one)

Followed by a talk by Robin Wilson on the *Coultershaw Heritage Site and Beam Pump* describing the major developments that have taken place over recent years - installation of the turbine, restored engine house with collection of water pumps, the boardwalk and the new education centre in the restored warehouse.

Saturday 23rd January, 7.30pm. *The Village Pumps of Sussex*

Talk by Paul Snelling

Possibly not that well known a subject within IA circles. Prior to the introduction of mains water supply householders would obtain their water from streams, wells or from a pump. Cholera epidemics in London in 1854 started the decline of the village pump as water mains came on line. Paul will outline their career and show most of the known remaining pumps in the county.

Saturday 13th February 7.30pm. An evening of archive films and photos of Sussex Industrial Archaeology

Following our successful previous archive evenings, we plan to delve into the archives again. More details in the January *Newsletter*. An evening of nostalgia.

Saturday 19th March 7.30pm. Details in next *Newsletter*

SERIAC 2016, 23rd April, Kingston-on-Thames

Details and Booking form with next *Newsletter*

Please see the Mills *Newsletter* for Mills Group activities

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

Weekend of 31st October - 1st November. Giants of Steam weekend

Bluebell Railway. 01825 720800. www.bluebell-railway.co.uk

Sunday 1st November. London to Brighton veteran car run

Saturday 7th November, 10am to 4pm. Opening day at the Brede Steam Engines

Steam and working industrial engines. Situated 6 miles north of Hastings on A28 to Ashford. 01323 897310

Monday 9th November, 7.30pm. Railways in the round

Southern Electric Group, Sussex Branch presentation by Andrew Marshall showing a further selection of slides from the past 33 years. £2 visitors. Deall Room, Southwick Community Centre, Southwick. www.southernelectric.org.uk

Wednesday 11th November, 7.30pm. Rambling on - updating John Arrowsmith's rambles from Chichester

Chichester Local History Society presentation by Bob and Terry Carlisle. £3. New Park Centre, New Park Road, Chichester. 01243 784915

Wednesday 18th November, 7.45pm. Celebrating 60 years of the Southdown Motor Services

Transport Interest Group talk by Paul Snelling. £2.50. London Road Station, Brighton. 01273 512839

Tuesday 8th December. Steam train excursion from London Victoria to Eastbourne and Hastings

Photographic opportunities in Sussex. www.railwaytouring.co.uk

Saturday 12th December, 10am to 4pm. Opening day at the Brede Steam Engines

Steam and working industrial engines. Situated 6 miles north of Hastings on A28 to Ashford. 01323 897310.

2016: Wednesday 13th January, 7.30pm. Chichester and the English Civil War

Costumed performance by Paul Ullson. Chichester Local History Society event. £3. New Park Centre, New Park Road, Chichester. 01243 784915

2016: Admiral Sir George Murray Festival - 1st December to 1st May

at the Novium Museum, Tower Street, Chichester, exhibition on the life and times of Admiral Sir George Murray, staged by the Murray Club. Admission free

Do please always check details before travelling

The details of these meetings and events organised by other groups are only included as a guide and as a service to members: inclusion here is not intended to be seen as an endorsement.

The AIA in Sussex 2015

Roger Ford and others

The 2015 AIA Conference held at the University of Sussex followed their established pattern with nearly 100 delegates.

We assembled on Saturday morning for three lectures. The first by David Jones described the reconstruction of the Brighton Atlantic class H2 steam locomotive *Beachy Head*. Although described as a reconstruction this is, with the exception of the boiler, virtually a new build. The way that the numerous problems had been tackled held us all enthralled.

Dave Morris followed with *The life of Harry Ricardo, 1885-1974*. The name Ricardo was familiar to many of us but the extent and variety of his inventions and developments was still a surprise. Dave had retired as Senior Operations Manager of Ricardo UK and had met Harry in his early days at the firm. He has made a special study of the history of this very remarkable man and his firm which is based in nearby Shoreham.

Then came a talk by Ian Gledhill on *Magnus Volk and his Amazing Railway*. This was the story of another extraordinary engineer and his pioneering work but the highlight of the lecture was a movie film, recently discovered and restored, of the short lived version that actually ran in the sea from 1896. The 'car' needed 23 foot legs to keep it above water at high tide and was popularly known as *Daddy long-legs*. It had to comply with marine regulations, even carrying a lifeboat!

In the afternoon there was a short interesting session of members' contributions, the first speaker being Derek Barker on the Shipley (West Yorkshire) Heritage project. Mining in this area dates from the 1690s with many shallow coal pits and a complex geology. Use of light image detection and ranging equipment (LIDAR) revealed 44 shafts, 10 probable quarrying sites, limekilns and brick kilns.

Mark Sissons spoke next about an HLF funded LIDAR survey in the North Yorkshire moors – an area that once produced 40% of the country's iron ore. This survey identified signs of over 60 drift mines, miners' cottages, calcining ovens and tramway inclines.

Then came a presentation from one of our overseas members, Jur Kingma, on the unlikely topic of the adaptive reuse of big and small cranes. This included not only the most obvious utilisation of jibs by lying them flat to create landing stages but also the conversion of a real biggie, reborn as a hotel with rooms at 600 euros a night. Ian Mitchell gave a comprehensive description of Derbyshire I A Society's HLF funded project which investigated the Butterley gangroad, a horse drawn plateway built to take lime from Crich to the ironworks that sat atop the Cromford canal tunnel and hoisted up its coal and other supplies via a vertical shaft. The gangroad was converted to an edge railway in the 1850s. This was where Brunton's 'walking

horse' engine had been demonstrated – the experiment ending in failure when the boiler exploded. The first 'normal' engine ran in 1869. The line was modernised in the 1900s but lifted for scrap in 1933. The funding paid for excavations, provision of explanatory panels etc. after many community events to publicise the project.

Andy Sutton was the final contributor – on *cellular communications*. From this I discovered that I am 30 years behind the times (did you not know that already Roger! ed), never having owned a mobile phone. These devices, we were told progressed from TACS to GSM to GPRS to UMTS to HSPA and thence to LTE. This was totally incomprehensible to me. He also described how mobile phone masts and rooftop sites have evolved from 1985 to the present day – a curiously elastic definition of archaeology.

On Sunday morning the conference was first engaged with the AGM which was followed by the Rolt Lecture given by John Minnis on *Tom Rolt's interest in early motoring*. The lecture, which was very much appreciated, will be published in the *IA Review* in due course.

In the afternoon the conference divided into two with one group setting off on an open top Leyland double-decker (ex-Southdown) for a tour of Brighton. Our route took us through Rottingdean and Kempdown and included a view of Roedean School and a gasometer. The coal for the works was originally landed on the beach and then conveyed through a tunnel now gone. The resort was heaving with cyclists and tourists out to enjoy the sunshine. We admired the cast iron columns with their lattice arches on the marine colonnade. We passed the remains of the West Pier and then the eyesore that is going up on this site – an 'Annular Rising Platform to afford 360 degree coverage of the coastal area'. After drinking our fill of the ornate 1893 lamp standards, we went on to Hove, Old Steine and then back via the Royal Pavilion. Highlight of the afternoon was an in depth investigation of the (1841) railway station for which a huge chunk of the high cliff had to be removed and, at the rear, the site of Brighton Loco Works.

The other group set off on an RF coach, ex Green Line, first visiting Jill, the well-known post mill on the top of the Downs which had been originally built in Brighton in 1821 and re-erected on the present site in 1852. Jill was superbly restored to working order in the 1980s with the help of the SIAS. Jill's nearby partner Jack is privately owned and for the time being inaccessible. From there the group went to the South Downs Garden Centre to see Car No. 9 from the Volk's Electric Railway which is awaiting restoration.

On the way back we stopped at Stanmer Village where we were shown a remarkable Victorian rainwater catchment system now listed Grade II. Nearly a quarter of an acre had been cleared and coated with a mixture of sand and tar in the 1870s to channel water to filters and underground storage tanks said to contain a total of 120 thousand gallons.



A picture is worth a thousand words, IA on show. The open top bus tour, the Palace Pier, the wheel, Volks railway track, cast iron lamp posts, the neglected cast iron promenade (apparently condemned?), the eyesore i360 and the power station chimney. (Stephen Miles)

One of Monday's tours had to be switched from Shoreham and the Ricardo works, following the tragic accident at the Air Show the previous week, to Tangmere Military Aviation Museum. En route the President of the Sussex Industrial Archaeology Society, retired Air Vice Marshall Sir Freddie Sowery, gave us a talk on the Battle of Britain in which Tangmere had played such an important part. Later in the war Sir Freddie had flown Mustangs.

The excellent museum, which is entirely run by volunteers, has on show airspeed record planes including Neville Duke's Hunter and the English Electric Lightning. Other hangar exhibits range from WWI to the Cold War. There is a very complete WWII exhibition, spread over three halls – inevitably of most interest to all of us who lived through it.

After lunch we were driven to the Goodwood Motor Circuit which was being prepared for the 'Goodwood Revival' to be held the following weekend. After two laps of the circuit in our coach (at a sedate pace) we watched while a specially commissioned Rolls Royce took Sir Freddie round two laps to celebrate his 94th birthday, accompanied by three of our delegates whose names had been drawn out of a hat. The final visit of the day was to the Chichester Canal to admire (and test) the Poyntz Swing Bridge of 1820 which had been recommissioned by the SIAS in 1997. The alternative tour on Monday went first to Coultershaw where there is an interesting beam pump from the late eighteenth century operated by a water wheel which pumped water to Petworth House one and a half miles away. The pump was restored by the SIAS in the 1970s. Also to be seen was the 2012 Archimedes screw

turbine. The house itself has several features of 'industrial' interest. However, for many, the highlight of the day was access to the large artefact store at the Weald and Downland Open Air Museum. Like most museums there is a great deal of material which is not on show and the opportunity to study this and even to handle some of it was much appreciated.

Monday's evening talk was by Frank Gray who is Director of Screen Archive South East. Some of the first moving pictures were created in Brighton and Hove and examples were shown to great delight.

On Tuesday, one of the two tours set off north-east with a commentary by Ron Martin, to the 1903 Brede Water Pumping Station where we were lost in admiration at the wonderfully restored machinery. Originally built to house two triple-expansion Tangye pumping engines, a Worthington Simpson engine was added in 1941 to increase the capacity to three and a half million gallons per day. One of the Tangye engines has been scrapped but the other and the Worthington Simpson can be - and were run - on compressed air. The standard of restoration of these, plus a large and varied collection of stationary engines, mostly concerned with the water industry, is amazing.

In Bexhill we went to the small but very interesting Bexhill Museum which contains such weird and wonderful objects as a replica of the Serpollet *Easter Egg* steam car which took the land speed record to 75 mph in 1902, a Sinclair C5 modified to travel at 150 mph (who would dare to drive it?) and a school built lightweight car that took the battery powered record to 106 mph in 1993.

After lunch we inspected the De La Warr Pavilion – 1930s Modernist and Grade I listed. And so to Hastings to sample the very steep cliff railway and a small fisherman's museum which holds a complete 1912 lugger hauled inside the former chapel before the re-building of the south wall. This area of the town holds Victorian three-storey black wooden sail lofts and is where the fishing fleet is hauled up on to the beach each day, mostly using elderly bulldozers which also push them into the sea.

The alternative tour on Tuesday headed north to Gatwick Airport and the 1936 Beehive circular terminal building, now converted to offices. Listed Grade II, it is the world's first fully integrated airport building complete with access by subway to the railway. Originally it also had covered telescopic gangways to shelter passengers while boarding.

On the way to Sheffield Park, the headquarters of the Bluebell Railway, we passed the spectacular 1841 Ouse Valley Viaduct, 96 feet high and three quarters of a mile long. We were able to visit the engine sheds and in particular the Atlantic Loco project which we had heard about in the lecture on Saturday. After a visit to the carriage works at Horsted Keynes we took the train along the newly restored line to East Grinstead and then back to Sheffield Park with a cream tea on the way.

Poyntz Bridge
is put to the
test by
AIA tour members
(AIA News)



On the final day our transport was a Routemaster. We were first treated to a ride on the Volk's Electric Railway of 1884 – the first in the world but now converted to third rail operation. At the half way station there was a tour of the main storage depot and Magnus Volk's original workshops, still very much in use today. We spent the rest of the day at the Amberley Museum which ranks very much on a par with the Beamish and the Black Country museums. Occupying a huge area, 46 separate artefact accumulations cover just about every aspect of twentieth century life. It boasts an excellent narrow gauge railway with both steam and diesel haulage (including *Polar Bear* from Groudle Glen, Isle of Man). A free bus service enables visitors to range over the whole museum area. We were given a conducted tour of the railway workshops, a short distance from which is a Southdown Bus Garage with six vintage buses, all in working order. Oldest is a Tilling-Stevens petrol electric double decker of 1914 which carries a second hand 1907 body. Nearby is located a fire station containing a 1929 Dennis among others. The cycle collection boasts items going back to an 1819 child's hobbyhorse and an 1870 boneshaker.

The very helpful tour notes were compiled by Robert Taylor and the material for the excellent gazetteer was brought together and edited by John Blackwell, Peter Holtham and Martin Snow and finally assembled by John Stengelhofen. Everything went smoothly thanks to John McGuinness, the Conference Secretary, and to Steve Miles who performs the somewhat thankless task of Booking Secretary.

All in all a most interesting conference; full marks to the organisers, particularly Malcolm Dawes and John Blackwell of the Sussex Industrial Archaeology Society and to Paul Saulter of the AIA who triumphed over this summer's weather ups and downs to give us sun blessed areas to visit every day.

We look forward to Telford in September 2016.

Society Visit to Selsey

Tim Ralph

On 20 June an impressive turnout of some 20 members assembled at the East Beach Car Park at Selsey. In the morning local historian Bill Martin led us on an excellent 2 mile walk to view externally a surprising number of homes which still incorporate former railway carriages. Before setting off Bill explained how in the 1920s Tommy Berg bought an area of land between Drift Road and Park Lane. He created the Park Estate comprising 50 plots, each with either a wooden chalet or converted railway carriage(s), which could be leased as holiday accommodation. At the time the redundant railway carriages were being sold off for about £25 each. Subsequently the properties have been sold off as private accommodation.



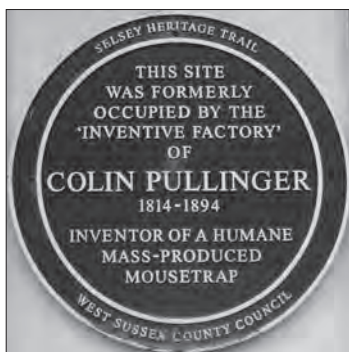
One of the 'disguised' former railway carriages (*Trevor Smart*)

Some of the surviving carriages can easily be spotted whilst others are less obvious or impossible to identify from the outside. So far Bill has identified some 28 homes built using carriages, but suspects there are more he has yet to identify. Where the carriage is not immediately visible, clues to look for are steps leading up to the front door and the distinctive rows of windows. Houses comprise 1 or 2 carriages which may be parallel to the road or at right-angles to it. As we walked round we were impressed by the number of properties we saw and the way the carriages had been incorporated. A few of the properties are available for rent as holiday homes and/

or bed and breakfast. A fascinating walk and a real eye-opener for me. An online search for 'Selsey railway carriages' will bring up more details.

Before lunch Alan Green led us a short distance along the former trackbed of the Selsey Tramway to view the Selsey 'Listening Post'. This was a WWI acoustic mirror constructed in 1916 and converted into accommodation in the 1930s. Only a small number of acoustic (or sound) mirrors were built around Britain and were intended to give advance warning of the approach of enemy aircraft. Due to the various extensions around the structure it is difficult to appreciate its original function.

After lunch we met up again to explore the High Street. Joe Whicher led us to a blue plaque which indicated the location of 'the inventive factory' of Victorian businessman Colin Pullinger who, amongst numerous other enterprises, invented the 'humane mousetrap' of which more than 2 million were produced. Nearby



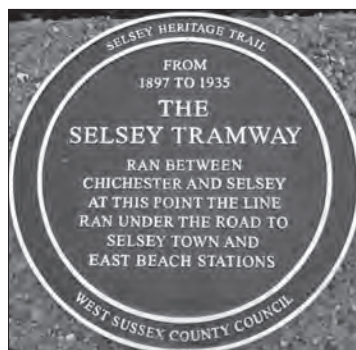
(Trevor Smart)

another blue plaque identified his birthplace. Another referred to Edward Heron-Allen a 'lawyer, scholar & Polymath' who lived nearby and produced numerous writings on topics as diverse as violin making, local history, ancient Persian texts and marine zoology. Alan pointed out the *Neptune* pub which incorporates Mixon stone in its facing. This is a form of limestone which is found at the Mixon Reef off the coast of Selsey and is exposed at very low tides. It can be found on a number of buildings in the locality

and was used on parts of the Roman palace at Fishbourne. Almost opposite is the Selsey Hall which appeared on the cover of last *Newsletter* (No. 167). It opened in 1913 as a cinema and concert hall but was seriously damaged by fire in August 1926. It was restored but was last used as a cinema in 1964.

The final part of the tour involved a short trip up the main road to the site of where the Selsey Tramway passed underneath it. It was the only overbridge on the entire line. There is not much to see these days although peering through the foliage on either side one could just see where the line had been. A blue plaque commemorating the Tramway is now located here.

Overall it was a fascinating day and the area is well worth exploring.



(Trevor Smart)

Visit to Bursledon Brickworks Museum 13th August 2015

Alan H. J. Green

Those who attended SERIAC back in April will remember that a visit to Bursledon Brickworks Museum had been promised but, with the unexpected change of venue from Southampton to Winchester, this, and the other visits, were unceremoniously cancelled. However the last paper at the conference was about Bursledon, given by Dr. Caroline Haynes who had project managed the recent Heritage Lottery funded work at the museum. Her presentation was so good that Martin Snow was inspired to book her to give SIAS members our own tour of the museum, which took place on a typically wet day during this apology for a summer. Although he failed to control the weather Martin did organise a splendid day out.

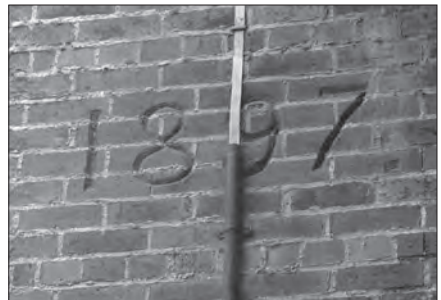
Bursledon is, of course, in Hampshire and way beyond the county boundary, but as the Mills Group boldly go on an annual 'out of county' tour why shouldn't we?

History

The Bursledon Brick Company arose out of a family concern, Hooper and Co. (actually run by the Ashby family) who were making bricks from the mid-19th century at Chandlers Ford near Eastleigh. When the clay supplies there began to run out they looked around for a new site, and in 1896 found the ideal location in the strawberry fields at Swanwick, on which they secured a lease. The site was ideal, not only on account of the abundant supplies of perfect brick-making clay, but also being adjacent to both the River Hamble and the LSWR line from Fareham to Southampton.

The first buildings (which now form the core of the museum) were completed in 1897 but the manufactory quickly expanded as demand for their products increased, and as the clay pits steadily retreated to the far extremities of the site extensive transportation systems were needed to move the clay around – of which more anon.

The business continued to be family run until just after the Second World War when it amalgamated with the Sussex and Dorking Brick Company, which was in turn taken over by the mighty Redland Bricks Ltd. Redland continued to make bricks, using the steam-powered machinery they had inherited, until 1974 when they closed the works. The principal reasons for the closure were inability to compete on costs with more modern brickworks and the cost of the modernisation needed to comply with the Health and Safety at Work Act, which came into force that year. In addition the new M27



The date on the chimney recording the completion of the first buildings
The placing of that lightning conductor is none too sensitive!

had cut a wide swathe through the site. The Department of Transport provided two concrete overbridges to connect the severed portions of the brickworks but, in the event, they were never used as closure came first.

The site, complete with all buildings, plant and machinery, was left to fall derelict whilst Redland tried to find an alternative use for it. Fortunately for us the Grade II* listing in 1980 of the original buildings put paid to any ideas of demolition and redevelopment of the southern portion of the site which was passed in 1991 to the Hampshire Buildings Preservation Trust. This was in consideration of the princely sum of £1 and came with a £700,000 dowry, funded from development of the rest of the site, for restoration as a museum. The Trust repaired the buildings and set about restoring the machinery. Heritage Lottery funding enabled the restoration to continue and today Bursledon is the only steam-powered brickworks in the UK.



The northern aspect of the preserved buildings shewing, to the right of the chimney, the kiln block.

Making bricks the Bursledon way

Caroline's tour took us through the entire brick making process at Bursledon, beginning with the hand excavation of the clay from beds that were 40 feet thick. As *all* the workers were paid per 1,000 bricks produced their take home pay was very weather dependent; if the clay could not be dug, bricks could not be made so everyone was hit in the pocket! Later, clay was dug mechanically using Ruston Bucyrus 22RB face shovels and drag-lines. Amazingly two of these were left on site at closure instead of being sold off and thus, although somewhat decrepit, and now form part of the museum's collection.

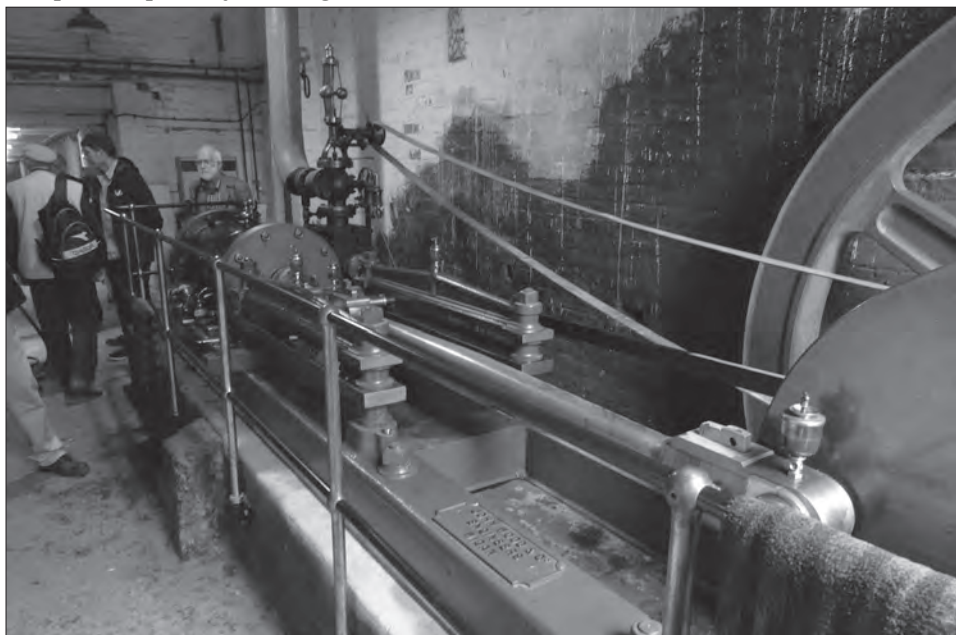
Initially the clay was moved by narrow gauge railway skips but this was replaced in 1939 by an aerial ropeway, working on the principle of a ski lift but with buckets rather than gondolas. This installation proved too much of a temptation to the local



The two 22RB machines parked adjacent to the access road. They still carry the obligatory Ruston Bucyrus livery of maroon and cream. It will be some while before they will be excavating clay again. boy population who treated it as a free fairground ride, hanging onto the buckets and dropping off just before the buckets self-discharged into a hopper. Dangerous though this was - as was their swimming in the sheer-sided clay pits – surprisingly there is no record of any serious injuries or deaths occurring.

Bursledon concentrated on machine, rather than hand, made bricks and the machinery was all built by Bennett and Sayer of Derby, installed in 1897 and still working in 1974. The clay was first macerated and mixed before being extruded in a rectangular ‘sausage’ onto tables where it would be wire cut into bricks, eight at a time (imagine a multi-bank cheese cutter and you’ll get the idea). These had to be removed quickly as any hold-up in the cutting process would result in an excess of sausage which, Caroline pointed out, once filled the room preventing the door being opened! The machine could produce an incredible 40,000 bricks a day in ideal conditions, but the usual daily rate was 33,000. The men worked in set gangs who knew each other’s pace and they hated having newcomers imposed upon them as they would slow down the production rate. These wire-cut bricks, when fired, became what are known as ‘commons’ with a rough appearance only suitable for work which would not be seen. About a quarter of the wet bricks would be put through a press to create superior – and more expensive - facing bricks. The press

could only process one brick at a time and was operated by one man and two boys. The first boy put the brick in place, the man operated the press and the second boy removed the finished brick and put it onto a barrow. Despite this intensity of labour and rather hazardous process, on a good day they could turn out 7,000 facing bricks. All this machinery is powered by a single cylinder, double-acting steam engine, built by John Wood and Son of Wigan in 1885 and installed in 1897. Driving via line shafts, it remained the sole provider of power to the machinery right up to closure of the works in 1974. There are two horizontal coal-fired boilers adjacent to the engine house, one original of 1897 and the other dating from the Second World War, but both are now out of use, being beyond economic repair. Instead the Trust have installed a new vertical oil-fired boiler and the engine and machinery are run on special open days during the season.



The magnificent Wood & Son steam engine, which was the star of the show.
Its flywheel weighs 2.5 tons!

The wet bricks were then taken on hand barrows into the brick drying sheds where they stayed for around ten days. These two storey sheds have slatted timber floors above steam heating pipes which maintain a steady 30°C. It was noted that the upper floor is carried on joists which are actually old flat bottomed rails, inverted and supported on cast-iron columns. A very economical form of construction!

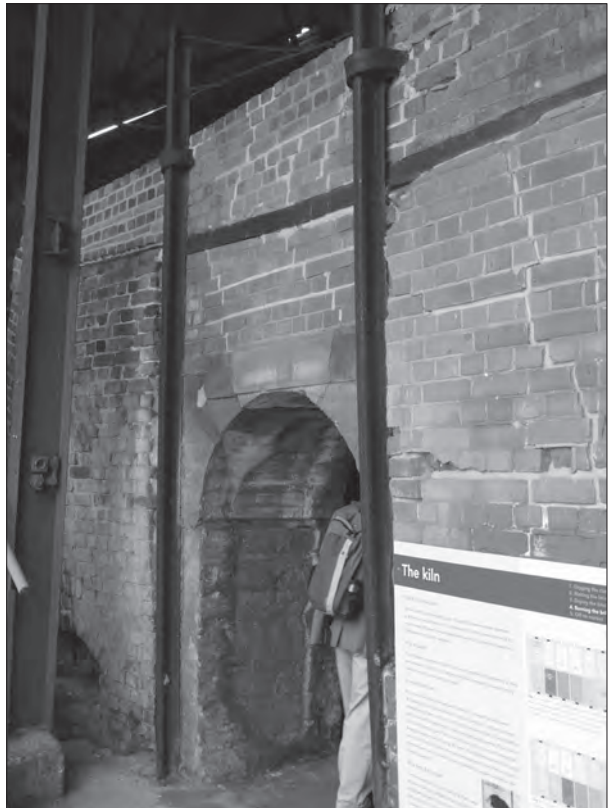
After drying the bricks were taken by hand barrow to the kilns. The kilns are of the Staffordshire type, with twelve chambers in two back to back rows of six, which

were kept continuously burning. The chambers are linked by a system of ducts and dampers designed to conduct air through the system to the tall chimney. Filling, firing and unloading was a continuous process on a 15 day cycle, and the hot air from the chamber which was actually alight would be used to pre-heat the adjacent empty ones prior to filling. To ensure that the fire never went out, but progressed from chamber to chamber, the work of filling and unloading took place at all hours of the day and night, for which the kiln men had to live on site. Each chamber held 30,000 bricks which were fired to 1,100°C for three days.

The finished bricks then needed to be transported to market. Up to 1950, most went out by rail via a connection from the Fareham-Southampton line, but some were still going out by barge on the River Hamble. After 1950, transport was exclusively by road and such was the demand, the lorries were often loaded with bricks that were still hot from the kiln meaning that on-board fires became an occupational hazard. They were obviously selling like hot bricks at this time!

Box of delights

On one of the upper floors is a museum room devoted to bricks and brickmaking. It houses a vast collection of bricks, tiles and chimney pots by a wide variety of manufacturers as well as Bursledon itself. The collection includes – to your author's delight -- several Fareham chimneypots, made just down the line in that eponymous town, apart from one which was actually a Poling from Sussex. There were also informative displays about brickwork, including one demonstrating the horrific results of repointing in cement, rather than lime, mortar.



The entrance to one of the chambers of the kiln block. This would be sealed with a simple clay and brick wall during firing. Note the distorted brickwork and the steel straps holding it all together.



A row of chimneypots in the museum room, including several Farehams

Envoi

After we had thanked our guide for her most informative tour we repaired to the tea room where was served the best slice of bread pudding this side of the old station buffet at Sheffield Midland, and then the shop. In the latter was found the ultimate must-have possession for your author – a pencil pot made at Bursledon in the style of a Fareham chimneypot. Had someone pre-warned them of my predilection I wonder?

(All photographs by the author)



The ultimate pencil pot...

Visit to Shoreham Port 9th July 2015

Michael J. Hearn

A fine sunny Thursday morning 9th July 2015 saw some 27 members gathering adjacent to Shoreham Ports main building, Nautilus House in Albion Street for the start of the visit. Here we all met Tony Parker, the Director of Engineering, who was our guide and we were provided with High Visibility waistcoats to wear before boarding the coach to begin our tour at 10.30am.

Our first visit was to Shoreham Fort, located on the western side of the port it is a Site of Scientific Interest; here we were introduced to Gary Baines, the Chairman and founder of the Friends of Shoreham Fort, we were given an account of the design of the fortifications and an outline history of the fort, its gun emplacements, together with an description of all the current renovation work that was being undertaken. The fort was built as a defensive structure at the entrance to Shoreham harbour, completed in 1857, based on a similar design to Littlehampton Fort. Planning for the fort began in the 1850s when the possibility of a French attack was thought likely. The fort which consisted of a gun platform some 15ft above sea level was in the shape of a lunette. The gun platform and its ramparts were surrounded by a ditch, with a Carnot wall that ran along its centre, being designed to stop attackers trying to cross the ditch. The wall itself had a number of loopholes for defenders to fire through. Unlike the open bastions that Littlehampton Fort had, Shoreham had a caponier with a brick roof at each of the three angles of the walls. It meant that riflemen could fire along the walls at any attackers in the ditch. The central caponier spanned the ditch and was connected to the fort by a tunnel under the gun platform and its ramparts. The East and West caponiers doubled as lavatories. A barrack block at the rear had room for 38 men. The fort had six 68-pounder guns on traversing platforms.

We also saw hidden away, a life size model gun built by students of Northbrook College, in wood and glass fibre. An important feature we all noted was how the volunteers were able to encourage the local youth to become more enquiring about the fort and its history; this reduced the levels of vandalism occurring on the fort's structures. Views of the new RNLI lifeboat station were also noted.

Following a short coach ride along the A259 this time entering the Eastern Arm of the Port from Aldrington Basin we traversed Basin Road South, and entered Fishersgate Wharf. Across the canal on the North side the ice bays were seen as well as a number of warehouses, a substantial amount of timber was seen; a commodity that is regularly imported and discharged into the port, and is used in the building trade.

On the opposite side on Hall's aggregate wharf was the Hanson owned trailing suction hopper dredger *Sand Heron* (1990 / 3,751gt), which was seen discharging aggregates,

she was one of a number of dredgers that regularly discharges marine aggregates at Shoreham and accounts for over 50% of the shipping activity within the port. Certainly the red safety boat on the dredgers stern was the cause of considerable interest!

Our visit that continued on into Parker's Wharf, here *Hav Dolphin* (1994 / 2,075gt) had recently arrived from Poole and was discharging steel. It was explained that the port had invested in a number of new cranes of which one was being used in the discharge process. Storage bays containing woodchip and cullet were also seen, as well as an abundance of wood being shipped from the Baltic awaiting collection. Our coach took us past the Southern Water Board site towards the lock gates where we all alighted and saw the coach depart. Visible was a digger on the beach assisting in the construction of one of the many groynes.

Shoreham Power Station was seen, and although we did not go for a tour inside it the author in a talk delivered to SIAS in 2006, made reference to it. Shoreham Power Station was opened in Summer 2000. Importantly, its position, within Shoreham Harbour, which has a history of electricity production as the site was previously occupied by the former CEGB Coal-fired Brighton 'B' Power Station, which closed in the 1980s. Making use of some of the existing infrastructure, its 350 foot high chimney stack, currently the tallest structure in West Sussex was built on the same spot as former brick-built stack that was demolished in 1998.

From the details contained in the Scottish Power web site: the new station possesses a gas turbine, a steam turbine and generator that are configured to provide one of the most efficient forms of thermal electricity generation. The fuel used is Natural Gas that is bought to the power station site via a custom built underground pipeline from the Transco gas compound located at Devils Dyke on the Sussex Downs.

Our next visit was to the Pump House to see the four 1.5mW pumps that were used to maintain a set level of water in the harbour. The Power Stations pumps which were running at the time were in an adjacent room. These provide the cooling water for the turbine. On departing the pump house and discharging timber at the outer lay by wharf was saw *Patria* (1995 / 2,210gt), the vessel had arrived from Immingham. Some lock gates were seen undergoing renovation and some interesting historical artefacts were seen particularly a carved memorial to Charles Birch Padden MInstCE, who was one of the early Civil Engineers who was responsible for the construction of the harbour in the early days.

On the whole this was an excellent visit given the sunny weather, which enabled us to view the working port and to see how it had developed and was continuing to be developed. Our thanks go to our guide Tony Parker who was on hand to answer questions about the port operations and to Gary Baines who was able to answer our questions about Shoreham Fort. Thanks also go to the organisers of this visit too.

Southdown 100

Paul Snelling

2015 sees the centenary of Southdown Motor Services which members of Stagecoach South staff commemorated with a bus rally on Southsea Common on Sunday June 7th. Stagecoach have painted two vehicles into past Southdown liveries to celebrate the centenary. These are 15586, 404 DCD, an Alexander Dennis Enviro400 on a Scania chassis which is painted in a wartime green / grey version (image on rear cover) and 27651, GX10 KZD, an Alexander Dennis Enviro300 painted in a green and cream scheme traditionally associated with the company.

Southdown Motor Services was formed on 2nd June 1915 with its Head Office at 5 Steine Street, Brighton. At this time the fleet comprised 31 vehicles which were a mixture of Daimler, Milnes-Daimler, Durham Churchill, Tilling-Stevens and Straker Squire chassis.

The constituent companies were:

Brighton, Hove and Preston United Omnibus Company which was formed in 1884. They sold their Brighton area rural services to Southdown but kept the Brighton town services and became Brighton, Hove and District (BH&D).

London & South Coast Haulage Company.

Worthing Motor Services. This company was in itself an amalgamation of Sussex Motor Road Car Company formed in 1904 and Worthing Motor Omnibus Company also formed in 1904. The Road Car Company acquired it's first motorbus in 1905, when they had started in 1904 they had two Clarkson steam buses on a route between Pulborough and Worthing. This route still exists as part of Stagecoach South route 1 to this day. They also ran their first excursion to Exeter on 14th June 1913.

Southdown were associated with the British Automobile Traction Company and the British Electric Traction Company (BET) with both companies and Thomas Tilling taking an interest . The Southern Railway acquired one third of ordinary shares.

In 1919 Southdown began its London to Brighton coach service during the railway strike. In early 1920 route 31 began between Bognor and Brighton taking 4 hours, today this is part of the route 700 Coastliner service.

By 1920 the area covered became much the same as it remained for the next 60 years with services covering from Warsash in the west to Hastings in the east and stretching up to Horsham, Crawley Turners Hill, East Grinstead and Crowborough in the north.

From 1921 Southdown interlinked services with Maidstone & District (M&D)

between Brighton and Hawkhurst and also between Eastbourne and Hastings via Hailsham. Later there was sharing on the long 122 road between Gravesend and Brighton. There was also a pooling agreement, known as the Heathfield pool, on routes running into that small East Sussex town, again with M&D.

In 1922 Southdown shared services with Hants and Dorset between Southampton and Winchester although the Winchester route was cut back to Fareham in 1926. On the northern edge Southdown met with Aldershot & District and London Transport.

Between 1925 and 1930 Southdown acquired 12 small companies and with the passing of the 1930 Road Traffic Act acquired another 49 companies.

In 1928 Southdown opened its Portslade Works in Victoria Road, Portslade. This was at a time when they brought in standardisation to the fleet. Here not only was every type of work undertaken on the fleet but they also made bus shelters, carnival floats and held the children's Xmas party in the canteen. Hence forward Southdown was a predominantly Leyland fleet although Tilling-Stevens vehicles held sway in earlier years.

In the coaching business express services ran into Victoria Coach Station. Southdown shared the South Coast Express with Royal Blue and others. A large fleet of coaches were kept for private hire work. Their crowning glory was the touring coach fleet usually seating around 28 people in comfort taking tourists around the country and abroad from 1950. New coaches for this work were regularly entered in the annual British Coach Rally, often lifting prizes.

In 1966, Labour won the election and the incoming Transport Minister, Barbara Castle, proposed nationalising the bus companies, mainly as a result of the companies having lost large volumes of passengers due to the continuing rise in car ownership. The government already owned the Tilling Group, which included BH&D, having acquired Tilling as part of the 1948 nationalisation of the railways. In 1967 BET suddenly offered to sell its operations to the government which was accepted. The government then issued a white paper to join the Tilling group, now the Transport Holding Company (THC) and the BET group. This formed the basis of the 1968 fleet and on 1st January 1969 the National Bus Company (NBC) was formed. At this time Southdown took over BH&D and its fleet of Bristol vehicles.

As regards vehicles, the Leyland National single-decker started to make in-roads to the fleet and Southdown had to eventually give up their dogged stance with front engine, front entrance double-deckers for large batches of rear engine, front entrance Bristol VR double-deckers.

In 1972, NBC introduced its corporate livery, for Southdown- BH&D this was

the insipid Leaf Green, not a patch on traditional green and cream. The coach fleet started to appear in the National White colours which didn't really suit any of the fleet bar possibly the H registered Leopards with Duple Commander IV bodywork. Eventually the coaching side went to National Express and Southdown disappeared from this market.

In 1986, deregulation came and with it management buy-outs. The former BH&D was split out and became today's Brighton & Hove Bus and Coach Company, currently part of the Go-Ahead Group.

Southdown was bought out by its management which sold it on to the Stagecoach Group. The name Southdown Motor Services lived on until quite recently when the operation went under the Stagecoach South entity.

Today's operations are greatly smaller than hitherto. The Stagecoach South coverage of the traditional Southdown area is principally between Portsmouth and Brighton with very few routes north of the South Downs with the notable exception of route 1. However, the principal Coastliner service between Brighton and Portsmouth enjoys its best frequency of service ever, albeit the route is split in three sections to keep reliability. Stagecoach East Kent has assumed routes around Eastbourne and Hastings, including what had been Eastbourne Corporation. Brighton and Hove took over the 12 route and provides an exceptional service. They also took on the erstwhile Brighton Corporation routes. Metrobus, another Go-Ahead company, took on the former 2 route, now 23 and extended to Crawley plus other traditional Southdown routes. In many places routes are provided by independent operators, notable amongst these is Compass Bus who have secured a niche market on many lightly trafficked routes and secured a ground breaking franchised operation on Worthing route 7. There is also the Cuckmere Community Bus which has greatly expanded since its inception in 1976 with assistance from East Sussex County and Southdown. As to the vehicles of the traditional Southdown there are many preserved in the traditional green and cream by enthusiast groups. Many can be seen at the Worthing Bus Rally in July and at other events. Some are operated as Class 6 vehicles and can be hired. Stagecoach South have 3 preserved buses, normally kept at Chichester. The Amberley Museum and Heritage Centre have a fleet of Southdown buses dating from between 1914 to 1937, plus one from 1978. These provide rides around the site and they have special event days, when they put out all the running vehicles and have other vehicles visiting.

A lot of the old Southdown infrastructure has disappeared. Only the garages at Hilsea East, Chichester, Worthing, Moulscombe and Lewes remain intact. Hilsea is used by First Hampshire and Dorset with Chichester still used by Stagecoach South together with the Bus Station opposite. Worthing depot remains as busy as

ever although the coach station was demolished some years ago. Moulscoombe is used as a rubbish handling centre. Lewes may be demolished for a new library to be built. The first Horsham garage still exists albeit modified and in use as a tyre depot.

Small garages, known as dormy (dormitory) sheds still exist at Chelwood Gate (warehouse) and Hassocks (car repair shop) although the best example is the former Storrington shed now preserved at Amberley Museum. Preserved bus 199, KUF199F, was one that was based at this shed.

Haywards Heath Bus Station still clings on although will shortly fall prey to a regeneration scheme in that area. Some of the enquiry offices still exist in various forms, notably Horsham and Shoreham.

The Southdown Enthusiasts Club continues to record the vehicles and services of the old company and today's Stagecoach operations as it has done for the past 60 years celebrating its Diamond Jubilee in 2014

Southdown Motor Services may be gone but the memories still live on, not just with enthusiasts but with the general public and former employees alike.



ECD524 at Amberley Museum
(Paul Snelling)

Phoenix rising – The rebirth of *Selsey Pavilion*

Alan H. J. Green

On page 12 of this *Newsletter* is Tim Ralph's report on the visit to Selsey that Joe Whicher and I led back in June. One stop thereon was the former *Selsey Hall*, aka *The Pavilion*, in High Street which was featured on the cover of *Newsletter* 167. It was looking rather sad with a buddleia growing out of its pediment and holes knocked through its north wall, barely concealed by a hoarding. Something seemed to be going on - but what? A man emerged from the building but scuttled back inside when he beheld us staring, so we were unable to ask. However, since then all has been revealed – *The Pavilion* is arising from the proverbial ashes.

Selsey Hall was constructed in 1913 as a theatre-cum-cinema and soon renamed *The Pavilion*, but closed its doors in 1964 leaving the town bereft of a place of entertainment. The building was then used as a packing factory, a storage facility and latterly has lain empty and neglected.

Joe spotted an advertisement in the local paper for a performance which was to take place in *The Pavilion* as part of the Selsey Festival, and managed to secure us tickets for the night of Sunday 9th August. The show was called *Tonight at the Pavilion - Charlie Chaplain!* and celebrated the centenary of the Great Little Tramp's birth - but more about this anon.

We joined the expectant queue with no idea as to what we would find inside; half hoping I suppose to see some vestige of the old theatre. On entering the front door it was soon obvious that this was very much a 'work in progress' as we had to pass through the foyer in a short tunnel of plastic sheeting before entering the auditorium. Sadly, subsequent uses have removed all traces of the theatrical interior so the building is now just an empty shell with its north wall dominated by a full-height roller shutter door. The space was much smaller than the exterior would suggest, and, intriguingly, the south wall is not parallel with the north giving a tapered floor plan further reducing its size. This was no doubt a result of *The Pavilion* abutting the pub premises next door. In the rear (east) wall are two doors which give onto a single-storey extension, used as the green room.

The programme gave more information about the building and what is happening to it. It has been bought by Jeff Alan who, with the assistance of the artist Prof. Pamela Howard, is restoring it as a multi-purpose centre for the arts. In August, 2014 they staged the first performance in the building for 50 years which was so successful they set up a small team to set about restoration "with a vengeance". They have secured a business development grant from West Sussex County Council to extend the foyer into the adjoining coffee shop and create a new side entrance into the auditorium. Under the plastic sheeting was seen a pile of reclaimed cinema

seats, destined for installation. It was all very encouraging.

So, back to the plot. *Charlie Chaplain!* provided a splendid evening's entertainment. It was written by Gillian Plowman and performed by Arts Dream, Selsey and told the story of Charlie Chaplain's life via a heady mixture of drama, music hall songs and silent film, all held together by a brilliant pianist who bore a striking resemblance to Mrs. Mills (remember her?). In the absence of a stage and curtains the performance took place, sideways on, at floor level against an amazing backdrop of large props, most of which, including two outsize suits of armour, had little bearing on the production but gave performers and stage crew somewhere to hide when they were not 'on'. The film clips were projected onto a cloth screen fixed to the north wall to – naturally - appropriate piano accompaniment. Seating was in three rows of loose chairs and the actors came on and off from the plastic tunnel and the green room, often passing through the audience en route. All in all, it was a very polished performance and the sense of fun was heightened by the knowledge that we were witnessing an historic event.

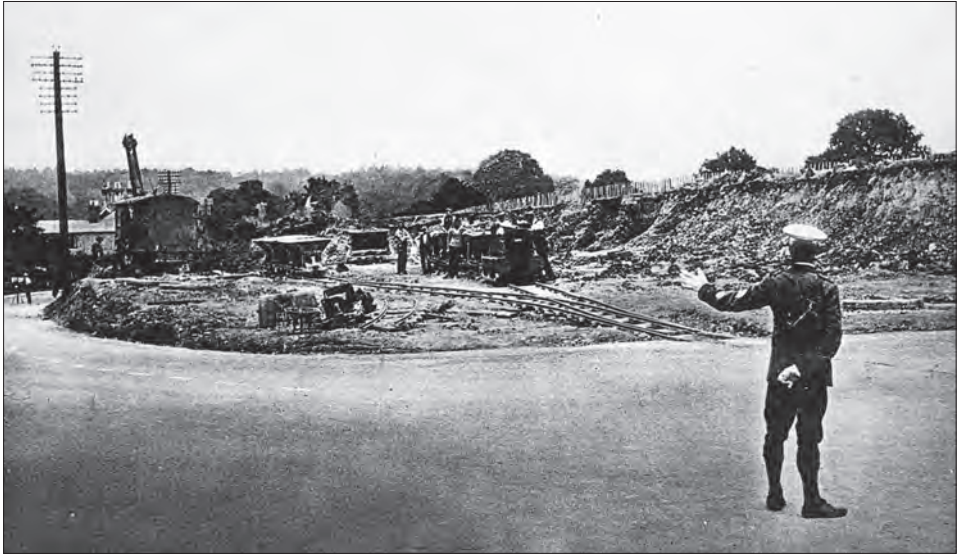
All nine performances sold out which gives a strong indication of public support for this worthy project which will return this interesting building to its intended purpose. All power to Mr. Alan's and Prof. Howard's elbows!



(Martin Snow)

Mystery Photo

Do you know your IA?



A bit different this time. It is linked to a piece in a recent Newsletter

So any ideas where and when?

(Pope/Parkhouse archive)

Update

The mystery image in *Newsletter 167* brought this response from our treasurer, Peter Holtham. -

‘This is one of the ventilation grills removed from Kemptown Brewery’s Malthouse that has been inserted in the Wall of Brighton College after the malthouse was demolished in the late 1960s. It stood on this north east corner of the junction of Sutherland Road and Eastern Road and was built about 1858.’

Please keep you eyes open for unusual features on your travels, or it may be something you see every day, but the rest of us are unfamiliar with.

I am always looking for examples of our IA heritage. If possible, let me have a picture, either for this feature or to provide inspiration for a future article(s).

Sussex Industrial Archaeology Society

- President : Air Marshal Sir Frederick Sowrey,
Home Farm, Heron's Ghyll, Uckfield
- Chairman : John. S. F. Blackwell, E-mail johnblackwell@ntlworld.com
21 Hythe Road, Brighton BN1 6JR (01273 557674)
- Vice-Chairman : Malcolm. H. Dawes, E-mail malcolm.dawes@btinternet.com
52 Rugby Road, Brighton BN1 6EB (01273 561867)
- General Secretary and Newsletter Editor : Martin B. Snow,
E-mail martin@snowing.co.uk
32 Orchard Avenue, Worthing BN14 7PY
(01903 208975 & 07836 675472)
- Treasurer, Membership Secretary and Archivist : Peter J. Holtham,
E-mail pandjholtham@virginmedia.com
12 St. Helens Crescent, Hove BN3 8EP (01273 413790)
- Chief Editor : Dr. Brian Austen, E-mail brian.austen@zen.co.uk
1 Mercedes Cottages, St. Johns Road,
Haywards Heath RH16 4EH (01444 413845)
- Programme Co-ordinator : M. H. Dawes, E-mail malcolm.dawes@btinternet.com
52 Rugby Road, Brighton BN1 6EB (01273 561867)
- Recording Co-ordinator : R. G. Martin, E-mail martin.ronald@ntlworld.com
42 Falmer Avenue, Saltdean, Brighton BN2 8FG
(01273 271330)
- Committee : Mrs. Diana Durden A. H. J. Green C. C. Hawkins
P. S. Hicks Miss J. O'Hara T. P. A. Ralph
Dr. Claire Seymour R. Taylor R. L. Wilson

Website : www.sussexias.co.uk

© 2015 Contributors and Sussex Industrial Archaeology Society
Published quarterly in January, April, July and October

Contributions for the next *Newsletter* should be sent to the Editor by the 5th December 2015

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*



Stagecoach Alexander Dennis Enviro400 on a Scania chassis which is painted in a wartime green / grey livery at Southsea Common to celebrate Southdown 100. See the article in this *Newsletter* (Paul Snelling)



AIA visit the Stanmer well and donkey wheel - very popular (Peter Stanier)

