



Sussex Industrial Archaeology Society Newsletter

Number 150

April 2011



The country garage at East Dean, West Sussex. The fuel pump is long disused, but the garage continues in the adjacent corrugated iron workshops. How long will this view remain? Many similar ones have been swept away in the name of progress in the years since the Society started publication of the *Newsletter*.

Recording and publishing on IA continues to be an important activity.

(Clive Sayer)

Newsletter 150

Contents

April 2011

Editorial	3
Forthcoming SIAS Events	3
Events from other Societies	5
IA and Me	9
150 Not Out	10
He also built the London to Brighton Railway	11
Green Energy at Coultershaw	12
Bedfordwell Pumping Station	14
If only everyday could be a Copper Day	16
Worthing Tomatoes	17
The SIAS Canal Group 2002 - 2011	18
Sussex Railway Stations in the 1960s	20
Film Show by Alan Redman	22
News from Brighton	23
The Art of the Georgian Engineers	24
Mystery Photo and updates	26

What shall I do with it?

Looking back over the many *Newsletters* I see that there is an occasional mention of the personal archives of members, as well as book and slide/image collections and maybe some artifacts. I make no apology for introducing a sober thought - what happens to them if something happens to you.

May I encourage members to make provision so that future generations may appreciate them, a line in your will or written instructions. After having first agreed in principle with those who are to receive them; maybe the Society, a Record Office or Museum. Too often the research of a lifetime goes on a skip for lack of a little planning.

While on the topic, your Society is a charity with no regular income other than membership subscriptions, donations and legacies can be a valuable source of funds for furtherance of the societies aims.

A form of words is available from the General secretary to cover either or both circumstances.

Editorial

Welcome to *Newsletter* 150. A bumper issue, including many activities from other groups; something to interest most of you after the dark winter months (the sun is out as I write this).

Looking back in the old *Newsletters*, there have been many visits to varying sites over the years, some repeated, others not. Identifying suitable sites for society visits is always a challenge to any committee, so perhaps you may have an idea for a visit, along with the contacts required and be prepared to offer to lead or assist in organisation. Please contact a Committee Member with your thoughts.

The same applies to the winter lectures; ideas for possible topics and speakers are always welcome.

I am again coordinating bookings for a tour of the Brighton Sewers on Saturday 18th June at 11.00 am, cost £12.00, this visit does require the negotiation of wet steps and a vertical ladder. This is not an official Society tour. Please contact me direct a.s.a.p. for more details or to book a place(s).

Please keep your contributions coming, I have held a few items over, but always need news, reports, your 'IA and Me' and images, etc. Equally Brian Austen welcomes longer items for *Sussex Industrial History*.

Contact details are, as always, inside the rear cover.

Please note the email for Ron Martin has changed to: martin.ronald@ntlworld.com

Forthcoming SIAS Events

Malcolm Dawes

Weekend of 14th-15th May. *National Mills Weekend*

See *Mills Newsletter* for details

Saturday 4th June, 9.50am. *Trip up the Brighton Line, visit to Clayton Tunnel Cottage, the Ouse Valley Viaduct at Balcombe, and will include visits to some other interesting IA sites on the way*

The day will begin with a rare opportunity to visit the cottage above the north entrance to Clayton Tunnel. Park in Clayton Recreation Ground on the east side of the road near to the tunnel entrance (TQ 299 141). Meet at 9.50am in the field followed by a short walk to the security gate for the cottage. The owner has kindly offered to show us around the cottage and the grounds behind the ornate tunnel portal. The next visit is to see the Volks Electric Railway stored items in the Museum at South Downs Nurseries, Hassocks. One of the historic Volks Electric Cars is in store at Hassocks and is not usually available for viewing.

The lunch break will be in Lindfield where the opportunity will be taken to look at Lindfield's horse gin which is in the grounds of the Red Lion. There are many food

outlets in the village. In the afternoon Alan Green will be leading a guided tour of the Ouse Valley Viaduct – not actually on the viaduct but from the fields below. The viaduct has undergone an extensive programme of repairs and conservation in recent years. Parking is difficult in the area so the detailed arrangements for the afternoon will be finalised during the lunch break.

Note: The group size for the visit to the tunnel cottage is restricted so it is essential to book in advance by contacting Malcolm Dawes, email malcolm.dawes@btinternet.com or tel. 01273 561867.

Saturday 9th July, 2.15pm. Guided tour of the De Witt Kilns at Amberley Museum

The De Witt Kilns at the museum are currently undergoing extensive restoration costing £391,500, which has improved access to the kilns and opened up areas that were previously not easy to view. We will be having a guided tour of the fully restored kilns which will have been officially opened by Prince Michael of Kent on 4th May. The repairs and conservation of this historic structure has included major work on stabilising the west side of the kilns and relaying the railway line that served the kiln. A new exhibition has been created in the bagging shed and the new access pathways incorporate interpretative signage.

SIAS members will be able to gain entry to the museum at a discounted rate of £8.00. You should bring this Newsletter or your Membership Card and confirm that you will be going on the SIAS visit to the kilns. Meet at the kilns at 2.15pm.

Wednesday 20th July. Sussex Mills Group visit to the Mills Archive and Rural Life Museum at Reading See Mills Newsletter for details

**The following two visits have been organised by the
Chichester Canal Group in conjunction with Chichester Festivities**

For further details contact Adge Roberts
adgeroberts@yahoo.co.uk or 01903 721762

Saturday 25th June, 10.00 am. Guided walk along part of the old Portsmouth and Arundel Canal Walk the towpath and see many engineering remains of the canal. Meet at Barnham Court Farm, Church Lane, Barnham – follow signs from Murrell Arms. Approx. 3 mile walk.

Sunday 26th June, 10.00 am to 4.00pm. Poyntz Bridge

The historic canal swing bridge will be in operation for the day. Situated just 200 yards south of the canal basin at Chichester. Poyntz Bridge, built in 1820, is possibly the only single span cast iron swing bridge of its age in the UK.

The bridge will be in operation during the day. There will also be a display of photos and artefacts illustrating the history of the bridge and the canal.

At 2.00pm there will be a guided walk around the canal basin led by Alan Green featuring the past industrial history that once surrounded the basin.

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

Sunday 17th April. *Post Office Vehicles, Veteran Cycles and Industrial Trains Day* Amberley Museum. 01798 831370

Sunday 17th April. *East Grinstead Vintage Bus Day*
<http://freespace.virgin.net/ian.smith/buses/CBR/CBR01.htm>

Weekend 30th April - 1st May. *Magnificent Motors Rally*
Classic cars, motorbikes, buses, commercial vehicles and traction engines. Seafont, Eastbourne. www.eastbourne.gov.uk

Weekend 30th April - 2nd May. *Great K&ESR Gala weekend*
Visting City of Truro locomotive. Kent and East Sussex Railway. www.kesr.org.uk

Sunday 1st May. *Historic Commercial Vehicles Run, between London and Brighton*

Monday 2nd May. *Stationary Engine Day*
Amberley Museum. 01798 831370

Monday 2nd May. *Special Events Day at Brede Steam Engines*
Brede Waterworks, Brede. 01323 897310

Wednesday 4th May. *Official opening of the restored De Witt Kilns by Prince Michael of Kent*
Amberley Museum. 01798 831370

Weekend 7th- 8th May. *Southern at war weekend*
Re-enactors, military vehicles, displays and concert parties.
Bluebell Railway. 01825 720800

Sunday 8th May. *Veteran and Classic Motorcycle Show*
Amberley Museum. 01798 831370

Monday 9th May, 7.30 pm. *On Board Southern*
Alan Harvey, a member of the branch, who has been a Guard on the EMUs for many years will give an insight to the Southern Railway. Southern Electric Group, Sussex Branch talk. £2. Deall Room, Southwick Community Centre, Southwick. 01273 462049

Wednesday 11th May, 7.30pm. Chichester City of Art

Chichester Local History Society talk by Alan Green.

£2. New Park Centre, New Park Road, Chichester. 01243 784915

Weekend of 14th- 15th May. 1940s weekend

Period displays and vehicles. Kent and East Sussex Railway. www.kesr.org.uk

Sunday 15th May. Heavy horses and woodland crafts

Amberley Museum. 01798 831370

Weekend of 21st- 22nd May. Bluebell Railway open weekend

Opportunity to see behind the scenes in the workshops, Pullmans and other parts of the railway not normally open to the public. 01825 720800

Sunday 22nd May. Lewes Vintage Bus Rally

Malling Recreation Ground, Lewes. www.lewesbusrally.org

Sunday 22nd May. Military vehicle show

Amberley Museum. 01798 831370

Friday 27th May, 7.00pm. Chichester Rocks: an introduction to local geology

Chichester District Museum talk by David Bone. Ravenna Suite, Westgate Leisure Centre, Via Ravenna, Chichester (Near Waitrose). Tickets £7 (£3 concs) from Chichester TIC (01243 775888) or Chichester Tickets (01243 813595)

Saturday 28th May. Operation Sussex Study Day

Sussex military defences from the Middle Ages to the Cold War. Newhaven Fort. Organised by Sussex Military History Society. www.sussexmilitary.org.uk

Monday 30th May. Special Events Day at Brede Steam Engines

Brede Waterworks, Brede. 01323 897310

Friday 3rd June. A walk around Georgian Chichester

Chichester Festivities walk lead by Alan Green.

Full details in Chichester Festivities programme. www.chifest.org.uk

Wednesday 8th - Saturday 11th June. Burgess Hill History Society archive material on display during festival week

Terracotta artefacts, photographs, documents, books, maps etc.

Cyprus Hall, Cyprus Road, Burgess Hill. www.burgesshillmuseum.co.uk

Saturday 11th June. 50th anniversary of the last passenger train on the K&ESR

Special events during the day. Kent and East Sussex Railway. www.kesr.org.uk

Weekend of 11th- 12th June. Mid-summer steam show

Amberley Museum. 01798 831370

Tuesday 21st June. Steam train excursion from London to Hastings

Photographic opportunities in Sussex. www.uksteam.info

A Plea From the Treasurer

Peter Holtham

I am concerned that increasing costs are not being covered by income, which is steadily draining our Funds
An increase in the rate of subscriptions is becoming unavoidable
This could be softened if more of our members, would make a
“Gift Aid Declaration”

Any member paying income tax at or above 29p in the pound can help, as the Society can claim Gift Aid from the government at no cost to you

Please contact me for the necessary form
P. J. Holtham, 12 St. Helens Crescent, Hove. BN3 8EP

**Weekend of 25th - 26th June. *Fire and emergency vehicles' weekend*
Amberley Museum. 01798 831370**

Wednesday 29th June. *From Seedcorn to Popcorn – the History of Chichester's Corn Exchange*

Chichester Festivities talk by Alan Green. Full details in Chichester Festivities programme. www.chifest.org.uk

**Saturday 9th July. *Sussex Vintage Model Railway Collectors' Annual Exhibition*
Knole Hall, Knole Road, Brighton. www.sussex-transport.co.uk/svmrc/**

**Weekend of 9th- 10th July. *Railway Gala – steam, diesel and electric locomotives*
Amberley Museum. 01798 831370**

**Weekend of 9th- 10th July. *Ardingly Vintage and Classic vehicle show*
Ardingly Showground. www.ardinglyvcvshow.org.uk**

Monday 11th July, 7.30 pm. *Vintage Album*

John Minnis, a well known member of the Brighton Circle and SIAS member, will be showing rare photographs from 1880 - 1905. Never been shown in public before.
Southern Electric Group, Sussex Branch talk. £2.

Deall Room, Southwick Community Centre, Southwick. 01273 462049

**Thursday 14th July. *Steam train excursion from Lewes to Ely*
Photographic opportunities in Sussex. www.steam.info**

**Weekend 23rd- 24th July. *Toy and Rail Collectors Fair*
Horsted Keynes Station, Bluebell Railway. 01825 720800**

Sunday 24th July. *Classic cars from the 50s, 60s and 70s*

Amberley Museum. 01798 831370

Sunday 31st July. *Worthing seafront bus rally*

www.worthingbusrally.co.uk

Sunday 31st July. *Classic Microcar and Scooter rally*

Amberley Museum. 01798 831370

Weekend of 6th-7th August. *Victorian Fair*

On the Saturday the fair will be operating during the evening.

Amberley Museum. 01798 831370

Sunday 7th August. *Eastbourne Vintage Bus Rally*

<http://freespace.virgin.net/ian.smith/buses/CBR/CBR01.htm>

Weekend 13th- 14th August. *Vintage Transport weekend*

Displays of historic classic and vintage transport including cars, steam road engines, commercial and agricultural vehicle. BBQ and real ale tents

Bluebell Railway. 01825 720800

Weekend 13th- 14th August. *Festival of Steam*

Steam engines on display and demonstrating the kind of work around the Museum's site for which they were originally designed. Steam rollers, lorries and carousel.

Weald and Downland Open Air Museum. Singleton, Chichester.

www.wealddown.co.uk

26th August – 1st September. *Association for Industrial Archaeology Conference in Cork, Ireland*

Details of programme and booking form at www.industrial-archaeology.org.uk

Amberley Museum website - www.amberleymuseum.co.uk

Do please 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.

IA Changes

Newsletter No. 1. refers to *Sussex Industrial History (SIH)*, (issue 41 of which members should have received with this *Newsletter*). *SIH* No. 4. (summer 1972) was the first issue of a 'Field Guide' by the Society, followed by version in paperback format in 1985 under the Phillimore imprint.

Much IA has changed (been lost) in the years since either publication, also from time to time there are new discoveries or a reinterpretation of established 'facts'. If you are aware of anything new or changes to known sites, please let me know as it is News.

IA and Me

John Blackwell

Whether pastimes of childhood reflect the interests of adulthood is a psychological question that I am not qualified to answer. Merely to state that my favourite subject at school was history; I studied Economic History 1760 – 1932 for GCE. I recall the delight of travelling to our holiday destination by train especially if it was steam hauled - how our luggage managed to be in the hallway of our guest house on arrival was one of the seven wonders of the world to a small boy. Coach trips, by Southdown, of course to such diverse places as Wookey Hole and Lullingstone Silk Farm, or the ubiquitous ‘Mystery Tour’ which always ended at a country pub (maybe these nurtured my later appreciation of real ale) were another delight of the 1950s. After studying for a degree the next few years can best be described as a period of “fast women and slow horses” until marriage brought a return to my home town of Brighton and sobriety. A chance suggestion, by a friend, that I accompany him to an evening class covering local history provided a dull diet of Roman villas, medieval churches and Palladian architecture until; enter stage right Frank Gregory with one evening of windmills, another of watermills, followed by an evening of industrial archaeology. The latter struck an immediate chord and in Frank’s inimitable way he, of course, had an SIAS membership application to hand. I wonder how many of us have been influenced in one way or another by Frank. Weekends were spent travelling around the county with a copy of *SIH* No 4, the first field guide, seeing what it was all about. News from Frank that the Mid Sussex District Council were looking to form a preservation society to restore Jack and Jill windmills at Clayton led to me being co-opted and with Phillip Spells, an architect and SIAS member, we drew up a brief with the vision of restoring Jill to working order and Jack as a museum of millers and milling. Appointed as Vice Chairman (works) for the embryo preservation society I am still delighted to be able to say this was achieved for Jill (Jack turned out to be in private ownership). I met a wonderful crowd of volunteers both workers and organisers and found that the mills radiated a real bond out to the local community – I hope the recently formed trust to restore Argos Hill mill has the same support and success.

What are my interests in IA? I suppose most members will associate me with railways – not so much locomotives or timetables more the architecture and history of stations and their immediate environs; which normally have an industrial context. However this is not all, I have a wide interest in all things connected with industrial history although I must admit that even some of the basic workings of machinery and industrial processes baffle me. One can only admire the ingenuity and mechanical skills of our forefathers. Over recent years I have confined my researches to the counties of East and West Sussex and have realised just how much there is to find and just how much remains to be discovered. Within SIAS I was fortunate to serve under and be guided by such eminent former chairmen as John Haselfoot, Wilfred Beswick and Sir Freddie Sowrey and consider it a privilege to be your current chairman.

150 Not Out

Martin Snow

No not an unlikely cricket score score! But as you may have noted from the cover this is the 150th issue of the *SIAS Newsletter*; perhaps one could include the previous *Information Sheets* of the group that started as the ‘Sussex Industrial Archaeology Study Group’ which produced five issues from April 1968 to April 1970. The Group changed it’s name to become the present Society at a meeting on 1st December 1972 and a series of four *Circulars* were sent to members in January to October 1973. That would make it 159 issues.

January, 1974 saw *Newsletter No. 1.* in the present series sent to members, it announced the decision to apply for Charity Status. This was agreed and the required changes to the constitution were approved in the February, issue three announcing acceptance of the application by the Charity Commisioners.

Among visits announced in No. 1., was one to the Open Air Museum at West Dean (now the Weald and Downland Open Air Museum) Admission 30p - it is £9.50 for 2011. The usual reminder about payment of subscription was for the princely sum of £2.00, (the current SIAS rate is £10.00). At the same rate of increase a quick tap on the calculator, removing the VAT element, would make the current subscription some £250.00 - don’t tell the treasurer!

The format of the *Newsletter* was as duplicated quarto (8” x 10”) sheets with occasional illustrations. Issue No 42. saw a change to the A5 format. Changes in production technology has seen the move to computer Desk Top Publication, better quality paper and from issue No. 140 the addition of a colour image on the cover.

From issue No. 114 the Mills Group was separate and they have produced their own ever since.

The Society website has scanned PDF versions available of all the *Newsletters* and circulars up to No. 9 and from No. 134. I plan to fill the gap in the near future. Anyone wishing to have a CD version should contact me.

Reviewing all these past *Newsletters* has prompted me to consider just how much has changed, but on balance I think there is more repetition in what is going on and is of concern. The Southern Industrial Archaeology Centre did not exist but is now well known to us as Amberley Museum (Chalk Pits), the site has changed in many ways, but the ongoing story of the De Witt Kilns has finally seen the completion of the restoration and there will be a Society visit on Saturday 9th July.

Rather than briefly summarise now, I plan to pick up some themes, maybe - ‘Nothing New’, ‘What Happened To?’. As ever, your contributions will be welcome, otherwise you will be stuck with whatever grabs my interest.

He also built the London to Brighton Railway

John Urpeth Rastrick 1780-1856

Chris Bryan

On the back cover of the October 2010 *Newsletter* 148 is a picture of the tomb of John Urpeth Rastrick, the largest memorial in Brighton Extra-Mural Cemetery. He was an influential engineer who contributed enormously to the development of early locomotive mechanical engineering and railway civil engineering.

Rastrick worked at the Bridgnorth Foundry between 1805 and 1817, in partnership with John Hazledine. Richard Trevithick used this foundry for the manufacture of a number of his ideas and it was Rastrick's task to draw them up, make them and get them working. The 1806 high pressure steam engine made here at the Bridgnorth Foundry is in the Science Museum Collection. In 1808 the *Catch me who can* locomotive was built by Rastrick to Trevithick's design. The locomotive was run on a circular track in London and was the world's first steam locomotive hauled carriage with fare-paying passengers, a demonstration of the ability of mechanical power to move people from one place to another. Rastrick designed the five span cast iron bridge across the River Wye at Chepstow. Cast by William Hazledine, brother of John and opened in 1816, it is still in use today.

Between 1819 and 1831 he was a partner in Foster, Rastrick and Company, Stourbridge. In 1828 Rastrick built the *Agenoria* locomotive which worked until 1864 and is now in the National Railway Museum, York. The *Stourbridge Lion*, one of a consignment of three locomotives delivered to the Delaware and Hudson Canal Company in 1828, was the first locomotive to be operated in the United States. The boiler survives, is owned by the Smithsonian Institution and is on display in Baltimore. In 1829 Rastrick was one of the three judges at the Rainhill Trials which conclusively proved the superiority and benefits of Stephenson's *Rocket* and assured the future of steam locomotive hauled railway travel. Rastrick's notebook and diary are a valuable record of the event.

In 1837 Rastrick was appointed joint engineer with John Rennie for the building of the London and Brighton Railway. By 1845 he had seventeen railway projects under his direction. There is no known portrait of John Urpeth Rastrick, unusual for someone who became a Fellow of the Royal Society in 1837. An LB&SCR locomotive built in 1896 was named *Rastrick*, and withdrawn around 1932. In 2002 a Dennis Trident Brighton bus was named *John Rastrick*. The Ouse Viaduct is an outstanding monument to him that is still in use. His Stourbridge Foundry is a Grade 2* listed building and derelict. Sussex provided nothing to the revolution when powered transport first emerged, but does have the tomb of a great contributor in Brighton.

There is a society tour on 4th June to include a viewing of the Ouse Valley Viaduct.

See the view of the viaduct on the back cover of this *Newsletter*.

The latest development at this long term IA project of the Society

Green Energy at Coultershaw

Robin Wilson

A 15Kw Archimedean Screw water turbine is to be installed in the wheel pit of the old corn mill at Coultershaw. The turbine will generate enough electricity for 15 houses, save 50 tonnes of CO₂ per annum and produce a gross income of £15,600 per annum. The work includes the grouting of the voids under the sluice structure with a hydro-insensitive polymer and the modification of the wheel pit to take the turbine. A temporary cofferdam upstream will allow the work to be carried out 'in the dry'. The programme is for the turbine to be installed in August, connected to the grid and commissioned in September 2011.



A typical archimedean screw installation used for power generation

The idea for a water turbine was suggested by Norman Langridge, at the Annual Meeting of Coultershaw volunteers in November 2007. Following a Pre-Feasibility Study in April 2008, a Scheme Design Report was commissioned in October 2008, funded by the South Downs Joint Committee. An Environment Appraisal incorporating a Flood Risk Assessment, a Fisheries Impact and an Ecological Appraisal was prepared in 2009 in support of a Planning Application and applications to the Environment Agency (EA) for a Licence to Impound Water and a Flood Defence Consent. Planning Approval and Licences from the EA were obtained in March 2010.

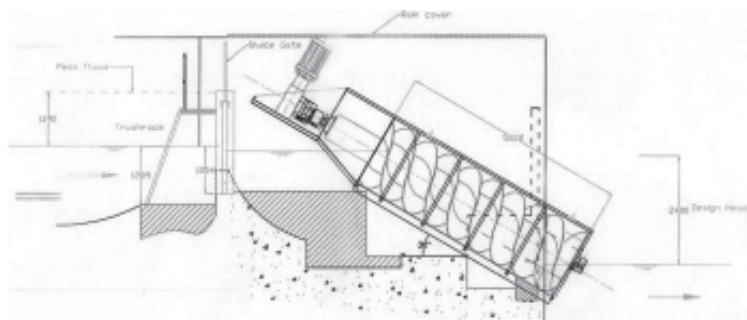
The turbine project is being partly funded by the Leconfield Estates, landowner for the site leased by The Coultershaw Trust. The Trust is making contributions towards the cost funded by a grant from the South Downs Joint Committee. The Estate will receive the beneficial income from the sale of electricity to the grid. The estimated cost of the project is £188,756 + VAT.

The Archimedes Screw is an invention for raising water for irrigation attributed to Archimedes in the 3rd century BC. An Archimedean Screw water turbine is a modern application and reverses the process in that water flows down a giant corkscrew set at an angle causing it to rotate. The Screw is slow turning and drives a generator at 1,500 rpm through a gearbox. The Archimedean Screw is fish friendly and requires only a coarse screen to collect floating debris, which can be removed manually. The generator is connected to the local supply network through a meter and the power generated sold to an electricity company. The Coultershaw Screw is 1.6m dia, 5m long and weighs 5 tons. The design head is 2.4m.

The turbine will greatly add to the educational value of the Coultershaw Beam Pump Site. The turbine will be contained wholly between the walls of the wheel pit. Protected by a steel grating, visitors will be able to look over the wall and see the turbine operating.

The Trust has made a 1st Round Application for a Heritage Lottery Fund Grant towards the cost of further development work to enhance the presentation of the site and learning opportunities for visitors. A Learning Consultant, a Museum Design Consultant and a consultant to draft an Activity Plan will be retained to produce designs for the improved interpretation of the site, the refurbishment of the Pump House, the fitting out of a new Education Room and Gallery and the development of an education programme for formal and informal learning. This further development work is a necessary prerequisite for a 2nd Round Application for a grant towards the capital cost of the new facilities, which were anticipated in the 2007 Conservation Management Plan. It's another long row to hoe!

The first Open Day for the Coultershaw Beam Pump is on Sunday 3rd April; thereafter every 1st and 3rd Sunday and all Bank Holiday Mondays until the end of September. The Pump will also be open on Mills Sunday 8th May and Heritage Sunday 11th September (free admission). All members of the SIAS are welcome to our Open Evening on Wednesday 13 July 6-8pm, wine and small eats.

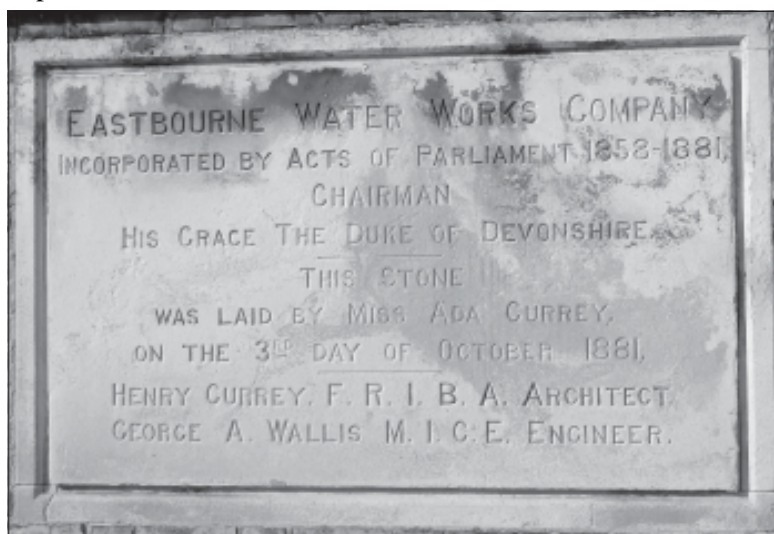


A low resolution scan of a cross section drawing of the suggested generation screw.

Bedfordwell Pumping Station

Ron Martin

In Newsletter No. 147, July, 2010 John Blackwell gave an account of the early days of Eastbourne's water. The first well at Bedfordwell was served by a pumping station built over the top of the well. It still exists although no longer used for pumping water. It was built in 1881 and only served until 1903 when it was closed due to pollution of the water. In 1923 it was sold and bought by Eastbourne Corporation and subsequently used as a Council Depot. It is now disused and awaiting redevelopment.



It is a typical waterworks building – the sort that makes one say Corr!!! as soon as you see it. It is built of white bricks with red brick plinth, dressings, and cornices and with tall semi-circular headed windows and a magnificent row of machicolations under the eaves. The Engine House is five bays long and five bays wide with the entrance at ground floor level. The springing of the roof is some 42 ft high above ground floor level. There is a lower ground floor some 15 ft below and this is where the composite girders and four cast iron diagonally braced supports for the beam engine, which is no longer extant, are to be found.

Adjacent to the Engine House is the Boiler House whose floor level is some 8 ft below the ground floor level of the Engine House. and is 25ft high to the springing of the roof. Part of the Boiler House is separated off and originally carried a siding from the railway line which ran immediately beside it. This was provided to enable coal to be delivered directly into the site. There were two Cornish type boilers which were located in the Boiler House and the flue ran horizontally to the outside

at the rear where it discharged into a 150 ft high chimney stack, since demolished. Exactly where the coal was stored is uncertain.

The roofs of the main buildings are hipped and supported on wrought iron and steel trusses, with wooden lantern lights along the ridge and are covered with natural slates.

Since acquiring the property in 1923 the Corporation carried out some modifications, particularly to the floors. The previous ground floor of the Engine House, which had a void in the middle to accommodate the beam engine was replaced by a new reinforced concrete one and an additional first floor of similar construction was inserted at a higher level. At lower ground floor level the area to the front was enclosed with a glazed roof and at the rear another extension was built

Also on the site are an Entrance Lodge and Weigh Bridge House and two two-storied Council Offices/Stores, one of which contains stables. It is not known when these were erected apart from being post 1923 - but it is interesting that Eastbourne Corporation was still using sufficient number of horses to require the erection of these stables.

This is such a magnificent building and it is hoped that any development will not detract from its eminence.

New Book Launch

**Southwater Local History Group
Exhibition and Book Launch
"WINNING THE CLAY"**

An illustrated history of brickmaking in Southwater

Saturday 21st May 2011

10.00am - 4.00pm

**Council Chamber
Beeson House, Lintot Square
Southwater**

Free entry

Refreshments available

If only every day could be Copper Day...

Dr. Tehmina Goskar

Research Officer: ESRC Global and Local Worlds of Welsh Copper Project
Swansea University

Anyone doubting the wide public appeal of industrial heritage should have come to Copper Day in Swansea on Saturday 5th March 2011. The day was organised by the team (of two) working on Swansea University's Global and Local Worlds of Welsh Copper Project, funded by the ESRC (Economic and Social Research Council). It is estimated that over 2000 people were drawn to Swansea over the weekend lured by an interest in copper, its past, and a desire to find out more.

A shared interest in copper resulted in unprecedented co-operation between public and private bodies and galvanised a diverse range of people into making this exceptional day happen. This was a completely voluntary collaboration with no dedicated resources of time or funds. Its success relied on the good will and contributions of, at the final count, 29 different organisations, groups and individuals. In total 29 activities and events took place at 13 venues, some of them continuing beyond the day itself. From museums, libraries and archives to social clubs, trade organisations and enthusiasts, Copper Day was a free festival of talks, films, tours, displays and the distribution of information and expertise.

Two important anniversaries inspired the festivities: 200 years since the first copper ingot rolled out of the internationally-famed Hafod Copperworks of Vivian and Sons, and the 50th birthday of the Lower Swansea Valley Project which began a pioneering post-industrial urban land reclamation scheme that sought to return as much of the valley back to its natural state, after the centuries of slow poison from the smelting and refining works.

However we also wanted there to be a legacy. These new collaborations demonstrate the great appetite for heritage-led change in Swansea and will be an inspiration to other post-industrial regions that have for too long been ambivalent about their history. The sheer number that turned out on Saturday, in addition to the host of comments left on the website (www.copperday.org.uk) affirm even further the depth of feeling there is for the city's heritage. We heard reports of visitors coming to Swansea from as far afield as Derbyshire, Birmingham and Weymouth. This is astonishing for an event that was organised with very little time and only the power of word of mouth and the internet to make people aware of it.

Websites:

www.copperday.org.uk

www.welshcopper.org.uk

Worthing Tomatoes

John Blackwell

Many will I am sure remember the plastic spade shaped labels that proclaimed the tomatoes in this box of the local greengrocers display were 'Worthing Grown' and indeed they seemed to have a finer taste than others. This would have been in the two decades following the Second World War and represented the final fling of an industry that had started in the 1880s. The early glass house growers found they could command high prices for early produce and at this time there was a burgeoning demand for tomatoes. At the peak of the industry there were over 200 nurseries in the Worthing, Durrington and Goring area. The 1898 25 inch:1 mile Ordnance Survey map shows the extent at this early date with even more in 1912. Produce grown included grapes, strawberries, melons, chrysanthemums as well as tomatoes. Most nurseries were family businesses and the work was hard and the hours long and by the 1950s and early 60s the second and third generation of the original growers' families were approaching retirement age. With the town rapidly expanding, selling to a developer made an attractive retirement option. Today there is little left of this once prosperous industry.

Malcolm Lintott whose great grandfather had glasshouses in Ham Road is researching the history and operation of the industry and with the help of Worthing Library recently mounted an exhibition of photographs and notes. This turned out to be most interesting with details, including reproductions of the OS maps pinpointing the locations of about ten nurseries. The Magness family which specialised in early forced strawberries owned North and South Avenue Nurseries in Lansdowne Road Durrington from the 1880s until 1933 before moving to Staunton Nurseries in Glebe Road, West Tarring. There were as many as 40,000 pots of strawberries placed on shelves at different heights along the length of the glasshouses. Each plant was hand pollinated using a rabbit's tail and the skill was to produce early fruits. In 1896 the first fruit was picked on January 21st long before the normal time of mid-March. They were then picked regularly until the outdoor crop was ready in June. Their most eminent customer was King Edward VII. A photograph taken c.1932 showed a wooden tray, about eight inches square, filled with about a dozen fruits to a pound weight, in which each strawberry was carefully placed on a leaf, such was their size (and one assumes flavour). There were also some early 1938 colour images taken by a member of the Lyon family who had glasshouses in Brougham Road, which survived until 1965.

Malcolm would be pleased to hear from any members who may have photographs or stories of any nurseries in the Worthing area. Contact malcolmlinfield@aol.com. *This article was collated using Malcolm's material published in the West Sussex Gazette on the 16th and 23rd February 2011.*

The SIAS Canal Group 2002 – 2011

Roger Reed

Although the Canal Group was formalized and adopted a Constitution in 2010, the team has been studying the West Sussex remains of the Portsmouth and Arundel Canal since 2002.

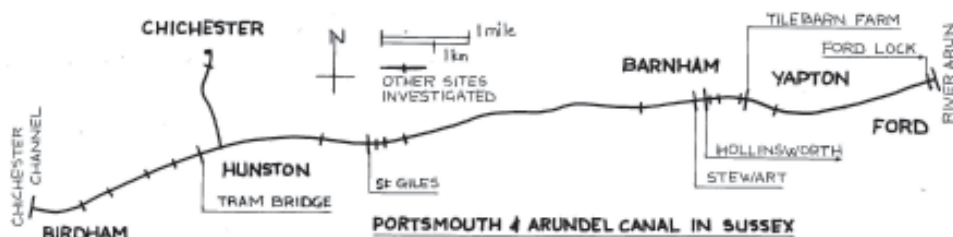
Over the years the Group has excavated twelve sites and made detailed surface studies of a further eight. Each has been recorded by photography and fourteen by engineering drawings. In 2010, under the leadership of Adge Roberts, the Group held 56 all day work parties.

Most sites are open to view from the adjacent footpath, with some of the excavations being left partially open, allowing a view of formerly hidden structures.

Two sites are being extensively conserved:

Stewart Swing Bridge, at Barnham Court Farm (SU 955 034). This was a cast iron swing bridge, similar to Poyntz Bridge in Chichester. The bridge itself was broken up more than half a century ago and only two small pieces, stored elsewhere, are known to survive. All the cast iron pieces displayed here are from other swing bridges on this canal. The brick abutments have been partially rebuilt using original bricks and lime mortar to an extent sufficient to accommodate the coping stones found during the excavations. Work is under way to conserve all the iron fragments stored here, in the hope that one day they may be incorporated into a reconstructed bridge on this site.

St Giles Bridge, Merston. (On private land with no public access). The conservation of this brick arch bridge is the Group's top priority. Work started here in 2005 on a seasonal basis with ground clearance and excavation in the winter and bricklaying and re-pointing in the summer. Excavation work was carried out on and around the bridge and towpath to determine its structure. A number of interesting finds were made which include evidence that the bridge was used as a military base during WW2. Something in the order of 2000 bricks, both original and new hand made, have been laid in lime mortar. Approximately 80% of the bridge needed re-pointing, of which about half has been completed.



Other structures investigated include:

Selsey Tramway Lift Bridge, Hunston (SU 860 021). The concrete north abutment was cleared of vegetation, then 30 cm of soil removed. Railway sleepers, ballast and two lengths of appropriate lightweight rail, together with a set of wheels were installed. On the 4th May 2009, the 'golden spikes' were driven in by three distinguished guests, watched by an invited party. (*SIAS Newsletter* 143).

Ford Number One Lock, (TQ 004 038). The south-west corner of the lock was excavated, revealing the upper south gate bottom quoin stone, together with supporting brickwork and gate cill beam. The quoin stone and brickwork are open to view.



The Remains of
Ford Number One Lock.
To be seen east
of Ford Church.
(Martin Snow)

Hollinsworth Swing Bridge, (SU 957 034). Excavation on the western side revealed the brick abutment walls. These are open to view, as is the bridge pivot stone. The brickwork needs conserving.

Tilebarn Farm Swing Bridge, (SU 965 036). Excavations revealed both abutments with limestone coping stones to the north wall and also found were the stop plank grooves with their cast iron liners. The pivot stone, complete with cast iron lower bearing ring and three coping stones can be seen.

The Future. Much remains to be achieved. For example the examination of culverts and the completion of conservation on three sites. In 2011, we plan to complete the repainting and re-decking of Poyntz Bridge in Chichester and to finish the landscaping and re-pointing of St Giles Bridge. We are also holding three public guided walks and two open days at Poyntz Bridge.

If our work sounds interesting and you would like to hear more, please contact Adge Roberts on 01903 721762 or Roger Reed on 01329 843732. We are always looking for more help, both skilled and unskilled, whether for a few hours a month or six hours on Saturdays. The pay is none existent, but the open air and good companionship are assured. Again, please contact us, we await your call!

SIAS Lecture 29th January 2011
Sussex Railway Stations in the 1960s -
Images from the John Hoare collection

Joe Wicher

As is usual the first SIAS meeting of the year follows an afternoon meeting of The Brighton Circle, at the Blatchington Mill. This elite group were aware of the subject of the evening SIAS lecture being presented by our chairman, John Blackwell, so most of their members stayed on, which produced a full house. It is unlikely anyone was disappointed as most would have appreciated the significance of the images shown.

We started our photographic tour from Brighton Station which had changed much less than almost any other station we saw since others had either been demolished or drastically altered. As we left Brighton John's commentary kept us fully informed



The bell push to summon a porter at Hassocks

on both architecture and history including our first stop at Preston Park where he could personally vouch for the comfort of the coal fire which used to cheer wintertime passengers in the waiting room.

It was interesting to see the transformation which has taken place at Hassocks (Gate) since the original

A long lost collection of station conveyances from Hassocks

Mocatta building with its classical gabled facade was no longer the prime structure. As we went from station to station we were able to admire the wonderful array of valancing on station canopies, and the various support columns and bracketing, features which made each canopy unique and would have added to the interest to be gained from train travel in the heyday of our railway system. John kept us informed not only on items of station furniture such as the occasional LB&SCR "Stroudley" water column but surprised some of us with the prolific number of railway cottages both for crossing keepers, usually built adjacent to the crossing, or those for other grades of railway staff which were sometimes built on land separated from the railway. They were usually built to standard designs and although still extant in the 1960s most have been swept away in the quest for better living conditions, a row near Three Bridges station being a good example.

From the Brighton Main Line we went east, hesitating for a while at Grange Road to remember that this was the notorious Doctor Beeching's local station although he still removed the line which served it. Then onward via all stations including East Grinstead, High and Low level, until we arrived at Tunbridge Wells West. At which point we were told that the impressive building has become a restaurant and is worth a visit to sample their comestibles so as to enjoy the railwayana used inside for decoration.

As we journeyed into South Eastern territory there were graceful examples by architect William Tress who used Italianate influences (as at Wadhurst) in his work, some structures distinctly different in detail to that of the London and Brighton Company. Before leaving the eastern extremities of the county we had a look at the splendid Crowhurst Viaduct on the Bexhill West line before it was blown up by the demolition contractors in 1969. The natural gas lit station of Heathfield was photographically well explored too.

John showed some excellent examples of the impressive architecture applied to the humble goods shed, or engine shed, but it came as a shock to be reminded that only one original brick built goods shed is still standing in Sussex, and to view it a visit to Arundel is required.

A trip along the West Coastway line gave a chance to study the erstwhile Drayton station and with it a reminder that it served as the Goodwood Racecourse Station before the line from Chichester to Midhurst was built when, in 1881, Singleton took over the task of handling the spasmodic invasion of race going crowds plus its equestrian role, tasks for which it had been well and amply designed.

Our navigation throughout East and West Sussex took in so many locations that at a few of them the existence of the railway may not even be realised by some members of the younger generation but for the audience it was a great reminder of the wealth of railway history all around us.

Film Show by Alan Readman - 11th February 2011

Alan Green

West Sussex Record Office not only contains the documentary archives for half our county (actually it has much more than that as it accommodates the diocesan records for the whole of Sussex) it also houses the film footage of the South East Film Archive. At our meeting of 11th February we were treated to an evening of Sussex films drawn from the archive and presented by Alan Readman, Senior Archivist at WSRO.

Alan began by outlining the work of the South East Film Archive which was established in 1992 with a mere 100 films, but now owns over 10,000 covering the counties of Sussex, Surrey and Kent. The archive, a mixture of professional and amateur footage, gives a fascinating insight into the last 120 years in a way that photographs and documents simply cannot. All films coming into the archive are re-recorded digitally but also copied onto (real) film since modern technology changes so rapidly that it cannot be certain that digital copies will always be accessible!

Alan had chosen a wide range of films for our pleasure beginning with the earliest known, a train arriving at Hove in 1896. He then moved on to give extracts from early films that were made in Sussex, firstly in Brighton and Hove and then at Southwick and Shoreham, where film making became an important industry. The pioneer Sussex filmmaker was George Abel Smith who commenced work in Hove in 1896 and moved to Southwick in 1903 where he began experimenting with colour, long before 'Technicolor' was even dreamed of. The film studios on Shoreham Beach came to an ignominious end in 1923 when they were destroyed by fire, the large amount of nitrate film on site doubtless fuelling the blaze. The only 'modern' film shown was one of a recent interview made with Joan Morgan who had starred, aged 16, in films at Shoreham; although in her 90s her recollections of the rather primitive techniques used were razor-sharp.

Having given us a brief history of the Sussex film industry, Alan then shewed a selection of film extracts that included farming at Elsted in the 1930s, hop picking at Harting, the only known film of the Selsey Tramway, Sir Alan Cobham with his aerobatic displays over the sea at Bognor, trains at Midhurst before the war and a Home Guard instructional film made at Wisborough Green

When I booked Alan some while back I did so with a request that he sought out a film on the Hailsham string industry that was believed to have been in the archive. He duly found it and gave what he felt must have been its 'premiere' as it had never been requested before. The film was in colour and shewed the making of

Silver Star binding twine. Unfortunately the film had no sound (such commercial films often had separate sound tracks which got lost) but the process of turning sisal into twine was shewn in great detail. The film was not dated either and there followed much debate over when it might have been made, the only clue being the 1950s Ford Anglia featured at the end which provided a 'no-earlier-than' date. As Chairman John Blackwell pointed out, this was the first moving picture show given to the Society and it drew a much larger than usual audience who were rewarded with an entertaining and informative evening. We hope that Alan might return in a couple of years to give us some more of those 10,000 films in the South East Film archive.

News from Brighton

Ron Martin

There are various historic buildings in Brighton which are the subject of some concern to those of us interested in our heritage.

The first is the former Royal Alexandra Hospital for Sick Children in Dyke Road. This was built in 1880-81 to the design of Thomas Lainson. Various additions have been made over the years. A new children's hospital was erected at the rear of the Royal Sussex Hospital in Eastern Road, in 2007 and the premises in Dyke Road was vacated. The developer has put forward various schemes ranging from complete demolition to retention of the original buildings and it is hoped that the latter option will be adopted.

The second is the proposed development to the Royal Sussex County Hospital in Eastern Road. This was built in 1828 to the design of Charles Barry and various additions have been made over the years, including various 19th century extensions along the Eastern Road frontage and at the north side of the site the Thomas Kemp Tower Block of 1970, the Millennium Wing and the Royal Alexandra Hospital. Nothing has as yet been finalised but the preferred option by the Hospital Trust is that all the buildings on the Eastern Road frontage including the Barry building will be demolished and new blocks built in their place, to be constructed in two phases. Watch this space!

The third site of concern is the iconic Saltdean Lido. This was built in 1937 to the design of Richard Jones and is considered to be the best example of a 1930s lido in the country. The building incorporates the swimming pool and a community centre and library. The lessee of the site wishes to develop the site, to close the pool and erect a block of flats. There is a lot of local opposition and schemes have been put forward for the place to be handed over to a community project. Watch this space!

The Art of the Georgian Engineers Lecture by Alan Green

John Blackwell

The final lecture in a very successful and well attended series of Winter Lectures was given by noted Georgian historian and SIAS member, Alan Green. Using the extended Georgian period from 1690 to 1840 and starting with Christopher Wren (1632-1723) who is chiefly known for being an architect. However the dome of St Paul's cathedral required considerable civil engineering expertise, it is in effect three domes set one inside the other. As Wren's son puts it in his *Parentalia*: "He raised another structure over the first cupola, a cone of brick, so as to support a stone lantern of an elegant figure and he covered and hid out of sight the brick cone with another cupola of timber and lead; and between this and the cone are easy stairs that ascend to the lantern." Next up was Thomas Telford (1757 -1834) who was apprenticed as a stonemason, learning his trade in Edinburgh's New Town. Work on Somerset House in London and the Commissioner's House at Portsmouth Dockyard which enabled him to study the construction of the docks

and led to his canal works and to his masterpiece the breathtaking Pontcysyllte Aqueduct near Llangollen. This crossing of the River Dee would normally have been made, following the engineering practice of the time, by a series of locks. Telford however boldly designed an aqueduct with a cast iron trough supported on 19 tapering masonry piers rising 120 feet above the river. Work started in 1795 (a mere 14 years after Abraham Darby's cast iron arch at Coalbrookdale) and was completed in 1805. Following the act of Union in 1800, when Ireland joined the



Pulling the plug on Pontcysyllte Aqueduct

U.K., improvements to the route from London to Dublin, via Holyhead, needed to be made for which Telford was appointed Engineer in 1815. To cross the Menai Straits on to the island of Anglesey he took another bold step to use a suspension bridge. Although suspension bridges had been built before none had approached the scale that Telford engineered for this fine structure. A roadway 580 feet long was suspended by 16 wrought iron suspension chains and stood 150 feet above the water and was seven years (1819-26) in construction. In 1818 Telford became the first president of the Institution of Civil Engineers, a post he held until his death. He was in Alan's opinion *the* greatest British Civil Engineer. The career of John Rennie (1761-1821) a Scotsman like Telford was next examined using examples of his Waterloo Bridge and the Kennet and Avon Canal. Waterloo Bridge (1811-17) was a graceful structure of nine 120 feet semi-elliptical arches with a length of 1,240 feet. Unfortunately the demolition of Old London Bridge, in 1832, increased scour, slowly weakening the bridge's foundations and it was replaced by the present concrete structure designed by Sir Giles Gilbert Scott which opened in 1945. On the Kennet and Avon Canal (1794-1810) Rennie used James Watt's (1736-1819) improved separate condenser beam engine at Claverton to pump water up to the summit level. Watt's business partner Mathew Boulton (1728-1809) the son of a toymaker inherited his father's business which he expanded establishing the Soho Works in Birmingham and becoming one of the first industrial entrepreneurs and founding member of the Lunar Society. He obtained government permission to produce coins in 1797 which were of better quality than those produced by the Royal Mint. Finally the work of George (1781-1848) and Robert Stephenson (1803-59) and their work on the Liverpool and Manchester Railway (opened 1830) and the associated Rainhill Locomotive Trials, which was won by the ground breaking *Rocket*. Having described the achievements of these engineers Alan delighted his audience with a selection of drawings from contemporary books and pamphlets in his collection. These gave rare glimpses into engineering techniques and site operation of the period. Of particular interest was a floating piling rig where the hammer was raised by horse power using a gin. What happened to the horse when the hammer was raised to the top of the rig and then released was not documented! Returning to the work of all the engineers not only did they produce structures that have stood the test of time (in most cases), they consciously made sure they were aesthetically attractive as befitted the Age of Enlightenment. It is a pity none of them left an imprint on Sussex. Thank you Alan for a superb and well researched lecture, presented under considerable difficulty (a slipped disc) with your usual aplomb and shrewd observations re the social status of footballers, rock stars and disrobed surveyors!

Mystery Photo - What does this show?



Do you know your IA?

What is it?

I don't expect you to tell me
where it is.

(Though that would have been
worth 1,000 brownie points if
you could. - No cheating!)

The mystery photo in *Newsletter* 149 was of the original wooden blocks laid to form the roadway. They have been since covered with tarmac several times and were exposed here in 2001 waiting to be resurfaced. These remains were photographed in Montague Street, Worthing, between Gratwicke Road and Crescent Road, where the broken surfacing occasionally allows a view in places.

Mystery Windmill update

Thanks are due to Russell Jones who has identified the mystery mill photograph published in *Newsletter* 142. While viewing the Mills Archive he found an almost identical image of Battle windmill, taken from about the same position and clearly showing the building in the foreground, although the fencing is a little different.

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

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The imposing Engine House at Bedfordwell, Eastbourne, looking a little sad waiting it's next role. Opened in 1883 it only served as a water pumping station until 1903 due to contamination of the well that was only 40 odd feet deep. Sold in 1923 for use as a council depot, it was altered to house workshop machinery on two floors. Could it's next incarnation be as high class warehouse style apartments?
(Martin Snow)



Ouse Valley Viaduct, designed by John Urpeth Rastrick.
This is to be viewed by members on the Society tour of IA sites on the Brighton Line on 4th June.
(James Kilfiger)