

INDUSTRIAL ARCHAEOLOGY NEWS

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COVER PICTURE

Re-erecting the guide frame of gas holder number 8 at
St Pancras, London, September 2014

Photo: Katriina Etholén

Gas holders – the end of an era

At the end of this winter, the last two gas holders in mainland Britain's gas network will be decommissioned, leaving just a handful in use on Scottish islands and at steel works. Until now, gas holders have been an essential part of the gas industry, since its inception in the early nineteenth century, and in September 2014 the Institution of Gas Engineers and Managers held a conference to mark this historic moment. Two AIA members who attended that event reflect on the passing of these very visible symbols of Britain's industrial past.

Ian West and Robert Carr

Part 1 The development of the gas holder

The gas holder had its origins in the small water-sealed laboratory vessels used by 18th century chemists, such as Joseph Priestley and Antoine Lavoisier, to collect the gases they were studying. The vessels were calibrated to measure the volume of the gas and were thus known as gasometers, a name that has been erroneously attached to gas holders to this day. From the outset, it was recognised that a gasworks needed some form of storage to accommodate variations between rates of gas production and consumption. The first gas holders were small rectangular containers, suspended in tanks of water (Figure 1), with a typical capacity of 60m³ (2,000ft³); the final design for the world's first large commercial gasworks, built at Salford Twist Mill in 1805, had eight of these. Initially, there was a widespread belief that gas holders posed a

serious explosion risk and so should be housed in buildings (when, in fact doing so increased both the risk and the consequences of an explosion). Around 1814, Samuel Clegg, who had helped William Murdoch build the earliest gasworks for Boulton and Watt, before setting on up his own and then becoming Engineer for London's Gas Light and Coke Company, demonstrated to a committee of the Royal Society that the hazards posed by unenclosed gas holders were small, by puncturing one and setting light to the escaping jet of gas. Within five years, Clegg and others were designing cylindrical gas holders with capacities of around 600m³ (20,000ft³), located in the open.

Early gas holders had a one-piece enclosed vessel (known as a lift or bell) floating in a water tank. The tanks were mostly, either located above ground and made of iron, or below-ground, lined with brick and sealed on the outside with puddle clay. An external cast iron framework consisting of columns and rollers, wires or other mechanisms maintained the lift in position as it rose and fell (Figure 2). By 1840, telescopic gas holders with multiple lifts had been developed, enabling much greater storage capacity for the same size of tank. The key to this invention was the annular water-filled trough at the bottom of each lift, known as a cup, with which the grip of the next lift engaged to form a gas-tight seal. In the 1880s the spiral guided holder was developed, which did away with the need for the expensive external guide frames (Figure 3). As gas demands grew, so did the size of gas holders, with some reaching capacities of 227,000m³ (8 million ft³), and steel replaced wrought and cast iron in their construction, but the basic design of

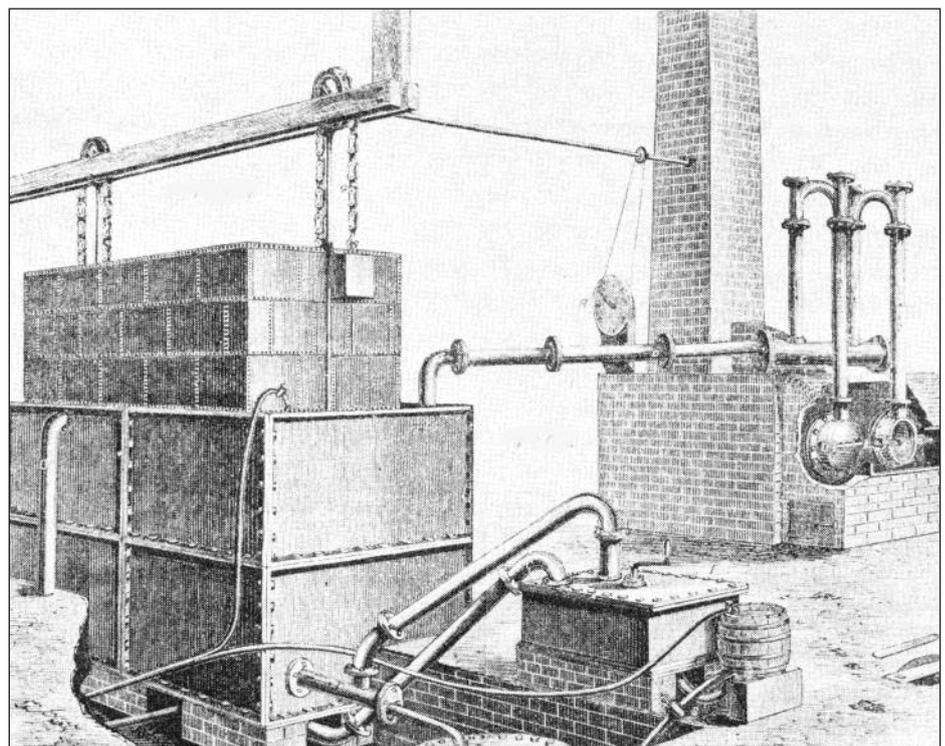


Fig. 1 – Clegg 1812 gas holder



Fig. 2 – Gas holder at Biggar, South Lanarkshire

Photo: Ian West

these water-sealed holders remained unchanged. In the twentieth century, a small number of waterless gas holders of various designs were built in Britain (Figure 4) and many more were used in Europe and North America; these were tall cylindrical structures, usually with tar-sealed pistons inside, which rose and fell as they filled and emptied.

The changing need for gas holders

From the birth of the gas industry gas holders have fulfilled the same essential function – balancing the diurnal variation in gas consumption, so that production and distribution systems could be sized economically and did not have to meet the peaks in demand. Throughout the nineteenth century, when gas was used predominantly for lighting, holders would be



Fig. 3 – Spiral gas holder

Photo: Ian West

filled during the day, when demand was low, and emptied at night. As electricity took an increasing amount of the lighting market in the twentieth century, domestic cooking and heating became more important, so the peak demand periods were in the mornings and evenings, with another spike at Sunday lunchtime; gas holders were then filled overnight and emptied throughout the day. Their role did not change greatly with the arrival of natural gas in the 1960s and 70s, but instead of smoothing the demand on the gas production plant, they enabled the high pressure national transmission system to operate at an efficient steady flow rate. However, the closure of the gasworks did mean most gas holders were now located on un-manned sites and so had to be operated remotely from regional control centres or designed to be fully automatic.

With natural gas came an expansion of the regional high pressure pipelines, which carried

gas from the national transmission system to the local networks, which were often designed to cycle in pressure throughout the day, filling at night when demand was low and emptying during the day. The gas storage this provided, known as linepack, at pressures up to 94bar (1360psi), had minimal operating costs and soon eclipsed what was available from gas holders, so the use of holders became confined to the winter months when diurnal storage requirements were highest. The gas industry has long wanted to dispense with gas holders, partly because of the rising cost of maintaining these structures, some of which are approaching 150 years old, and partly because they are much more expensive to operate than linepack. Gas holders also frequently occupy valuable inner-city sites and several, especially smaller, gas holders have been demolished over the past 30 years and the sites sold for redevelopment. However, despite a high-profile announcement by Transco, then the operator of the British gas network, about 15 years ago, that all remaining gas holders were about to be demolished, this did not happen, because the storage they provided was still needed. However, in the past two years, changes to both the pattern of gas supplies into Britain and the organisation of the industry have released more linepack capacity from the national transmission system. As a result, with a couple of exceptions, all the holders in the British mainland gas network, believed to number around 200 in total, are now empty and awaiting decisions on their demolition.

Danger, discomfort and heroism

One of the objectives of the IGEM conference was to share stories of working with gas holders. There was a remarkable reminiscence from someone who, probably as an apprentice, was several times sent aloft to clear the ice forming in

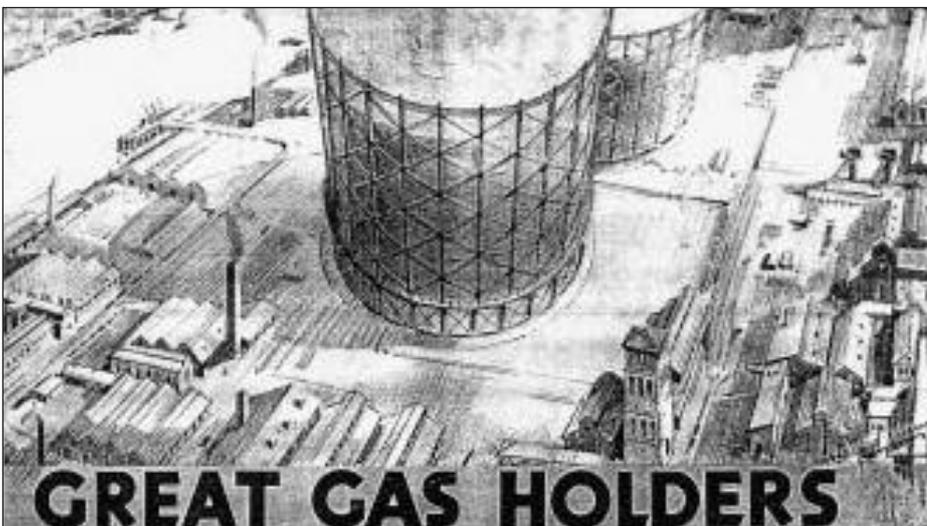


Fig. 4 'Great Gas Holder'



Fig. 5 – MAN gas holder Battersea

Photo: Katriina Etholén



Fig. 6 – Saltisford gasworks, Warwick

Photo: Ian West



Fig. 7 – Gas holders in Dresden – 1920s on left, 1908 on right

Photo: Ian West

the cups. Protective clothing was provided but this was scarcely adequate when high up on the side of a holder in the north of England. This had to be done during especially cold weather to prevent the lift from sticking. To break the ice, iron bars were used but as the hands froze it was all too easy to drop one, and then another had to be fetched to continue the work. Amongst the visible features of gas holders are the ladders and walkways provided to give access for inspection, maintenance and routine repairs. At the time these holders were built it was accepted that on ships men would go aloft in bad weather to set and trim sails and working on gas holders would be no different – but in this more safety-conscious age, even with the provision of safety harnesses, such work has become unacceptable and this has hastened their demise.

If routine work on gas holders was bad enough, the description of heroic deeds during the Second World War was even more hair-raising. Gasworks were an obvious target for German bombers who would attempt to set gas holders alight. As Clegg demonstrated, coal gas in the absence of air does not explode but if a sufficiently large rent could be made in a holder and the gas ignited, the fire might burn for several days, providing an invaluable beacon to guide subsequent bombers. A high proportion of the bombs dropped were incendiaries and

workmen on the top of the holder would try to throw them off or put them out with sand bags. Larger bombs often went straight through the top of the holder and were generally rendered harmless in the gas and water below. However, the incendiaries were likely to ignite the escaping gas so the holes were sealed using wet clay and iron plates laid over the hole. A photograph, probably posed, was shown of this emergency work in progress. Many George Crosses were awarded to gasworks personnel, the gas press at the time of the Blitz resembled a New Years Honours List.

Gas holder preservation in the UK

As late as the third quarter of the twentieth century much of the British landscape was still characterised by visible reminders of our industrial past, such as chimneys, colliery headgear, cooling towers and gas holders. By now most of these have gone but many gas holders have, until now, continued to serve a vital function. In large cities, London especially, many of them have continued to dominate the landscape as the exaggerated artist's impression (Figure 5) illustrates. Now that these remaining mammoths of the industrial age are about to disappear, public interest in them has become

heightened, as an internet search will demonstrate, and local activists, conservationists and amateur photographers are proclaiming their importance as historic landscape features. In recent years there have been vigorous campaigns, mostly unsuccessful, to preserve holders in many parts of the country, including Edinburgh, Sunderland, Liverpool, Bath and Rochdale. In the London area, activists are keen to retain examples at a number of locations, including Hornsey, Wood Green, Bethnal Green, Poplar and North Greenwich; some of these campaigns are described elsewhere in this edition of IA News. In Wandsworth, the local authority has given planning permission for the demolition of four gas holders, including the MAN holder, shown in Figure 4, as part of the Battersea Power Station redevelopment scheme; the two hectare site will be used for new housing, shops and offices.

The recent gas industry conference on the demise of gas holders discussed strategies for managing public reaction to demolition proposals but, regrettably, did not consider the wider industrial heritage implications of these plans. A handful of gas holders in England and Scotland were subject to listing while they were still operational and, in 2002, English Heritage, as part of its Monument Protection Plan study of the gas industry, commissioned a report from AIA

member, London-based industrial archaeologist and engineering historian Malcolm Tucker, on the historical significance of England's gas holders, which recommended that several more be listed. It is not clear that any action was taken as a result of this but, in any case, a number of holders which were already listed have been demolished in recent years, most notably a group of historic nineteenth century examples at St Pancras, London. A unique set of three conjoined holders, which shared some common support columns, was demolished at this site to make way for the HS1 rail line and other listed column-guided holders were demolished as part of a canal-side residential and commercial redevelopment. The cast iron guide columns and connecting framework of one single holder, number 8, have been restored and are currently being re-erected next to the canal as a 'landscape feature' (see cover picture) and there are proposals to restore and re-erect the columns and framework of the three conjoined holders with circular blocks of apartments inside them. Measures such as these may re-create some visual impression of gas holders but do not adequately demonstrate their original form and function. The cost of restoring and re-erecting just the guide frame of the single holder is several million pounds (the developers are coy about the precise figure), which means that such ideas are only likely to come to fruition in areas of high property values, like central London. Several European countries have adopted imaginative approaches to the preservation of gas holders, which will be described in part II in the next edition.

Gas holders of the waterless type are still in use in industries such as steelmaking. In 2013 the engineering firm, Motherwell Bridge, built a Wiggins waterless gas holder for Tata Steel, to store gas from the coke ovens at Port Talbot.

Spherical holders for storing methane are common at sewage works

Gas holder buildings

No article on the preservation of gas holders would be complete without some mention of gas holder buildings. As explained above, in the earliest days of the gas industry, holders were housed in buildings, before these were deemed to be unnecessary for safety reasons. Remarkably, a pair of these, built in 1822, survive at the site of Saltisford Gas Works in Warwick and have recently been converted to apartments (Figure 6). In our temperate British climate, steam or electric heating was usually sufficient to keep the cups free of ice, and only during really cold weather was it necessary for men to go aloft. However, in many parts of North America and mainland Europe the much colder winters necessitated the housing of gas holders within buildings where the air could be kept warm enough to prevent freezing; clearly scrupulous care in maintaining good ventilation within the building was essential. These large and magnificent circular buildings were often given a rich exterior architectural treatment, some resembling the Coliseum in Rome or the Albert Hall in London. In Europe, superb examples survive in Leipzig, Dresden, Vienna, Copenhagen, Helsinki, Turku, St Petersburg and elsewhere. In the north-eastern United States several splendid gas holder houses survive, including ones at Troy and Saratoga Springs, New York; Concord, New Hampshire; Attleborough Falls, Massachusetts and Oberlin, Ohio. A drawing of the 1872 gas holder building at Troy is even used as the logo of the Society for Industrial Archaeology.

Clearly these large and often decorative buildings have greater potential for adaptive re-

use than does a gas holder itself. At Dresden, for example, a pair of large gas holder buildings survive: one, built in 1908, houses a panoramic painting of the medieval Dresden skyline, known as the 'Panometer', whilst the other, dating from the 1920s, is derelict (Figure 7); a similar exhibition is housed in a gas holder house in Leipzig. In Vienna, four gasholder houses, built 1896-9, went out of use in 1986. Following a competition in 1995, four architects were chosen and each given a gasholder building to adapt. The interiors have been reused for apartments, offices and entertainment and there are interconnecting shopping malls on the ground floors.

In conclusion, it seems inevitable that the majority of these iconic symbols of an important industry – one in which Britain initially led the world – will disappear. It remains to be seen how successful local campaigns, such as those at Bethnal Green and Hornsey, will be in saving examples which attract particularly strong community support. However, the cost and safety implications of maintaining decommissioned gas holders intact in the long term mean that, unless some of the imaginative ideas which have been adopted elsewhere in Europe are pursued in Britain, the only surviving examples of wholly intact gas holders might be those preserved at the gas museum sites at Fakenham, Biggar and Carrickfergus.

Part 2, to be published in the next *IA News*, will describe the numerous imaginative schemes for reuse which have been adopted in other countries.

Acknowledgements

A number of people have been helpful in the preparation of this article but special thanks are due to Brian Sturt and Malcolm Tucker.

Information Age

In October the Science Museum launched the first permanent gallery in the UK dedicated to the history of information and communication technologies.

Information Age: Six Networks That Changed Our World explores the remarkable technological breakthroughs that have transformed how we communicate over the last 200 years. From the first transatlantic telegraph cable that connected Europe and North America in minutes rather than weeks, to the advanced computing power of the modern smartphone, Information Age looks at the huge impact the developments in communication technology have made on all our lives.

More than 800 unique objects from the Science Museum collections and state-of-the-art interactive displays bring to life the dramatic personal stories of those whose lives were changed by each new wave of technology. This landmark project for the Museum has been made possible by generous support from funders,

including a £6.3m grant from the Heritage Lottery Fund.

Information Age explores how our modern connected world was created through six networks, the electric telegraph, the telephone exchange, radio and television broadcasting, satellite communications, computer networks and mobile communications.

Within each network visitors can discover many remarkable objects and stories, including:

Thomson's original galvanometer used to receive the first telegraph messages sent across the Atlantic between President Buchanan and Queen Victoria in 1858.

A model of the Great Eastern (as built, ie before she was adapted into a cable ship) and Morse tapes from the ship. There is also about two feet of 1865/66 cable.

The original Marconi radio transmitter that made the first public broadcast in 1922 with the famous words 'This is 2LO calling' – announcing the arrival of the BBC and the birth of British broadcasting.

The intimate oral histories of women who operated our telephone exchanges until the introduction of the automatic dial.

Two of the world's fastest supercomputers in the 1960s, the Russian BESM-6 and the American CDC 6600, and how computing became the front line of the Cold War.

The development of two generations of satellite communication technology told through the first worldwide TV broadcast starring the Beatles in 1967 and the crucial role of GPS satellites first used to help coalition forces navigate the desert during the first Gulf War.

The NeXT cube, the original machine used by Sir Tim Berners-Lee to design the World Wide Web in 1989 and start a new age of instant access to information.

The 2500m² gallery has been designed by award winning consultancy Universal Design Studio. At its centre sits the spectacular 6-metre high aerial inductance coil from Rugby Radio Station. This enormous and strangely beautiful object resembles a series of giant spiders' webs. It was once part of the most powerful radio transmitter in the world and was donated to the Science Museum by BT.

The historic No 2 and No 5 gas holders at the Bethnal Green Holder Station

This is a particularly notable site and the number 2 holder deserves special consideration.

Tom Ridge

Marian place, London Borough of Tower Hamlets

The Bethnal Green Holder Station was established in the 1850s as a detached holder station for the Shoreditch Gasworks of the Imperial Gas Light and Coke Company, opened in 1823. The site of the Shoreditch Gasworks is now occupied by Haggerston Park in Hackney. The old brick walls in the park are the retained walls of the gasworks. Also retained in the north-west corner is the dry southern end of Haggerston Basin: a short narrow basin off the Regent's Canal used by barges delivering coal to the gasworks. Unlike the gasworks, the holder station was built on the Regent's Canal; and both historic gas holders are situated near the south side of the canal.

The No 2 gas holder was designed by the engineer in charge of the Shoreditch Gasworks, Joseph Clark, and completed by Westwood and Wright's of Dudley in December 1866. It has a columnar guide frame of 16 cast-iron columns on a circular in-ground brick tank, 134 feet in diameter. Each column consists of two superimposed classical

columns: a lower Doric column and an upper Corinthian column, separated by a rectangular junction box for the lower ring of decorative cast and wrought iron girders.

The lower junction boxes have lost their applied mouldings, the capitals of the Corinthian columns have lost their leafwork and the upper junction boxes have lost their superimposed cornice blocks. Despite these losses, the No 2 gas holder's guide frame was clearly designed to a very high standard of orthodox classical detailing.

The No 2 is also the smallest and earliest surviving of a series of gas holders designed by Joseph Clark for the Imperial Gas Light and Coke Company. A number of these survive in the large group of Grade II listed gas holders at the Bromley-by-Bow Holder Station on the east bank of the River Lea, in Newham. Compared to all the listed gas holders at Bromley-by-Bow and four similar listed gas holders at St Pancras, the No 2 is the most compact and the best proportioned.

In 1876, the Imperial Gas Light and Coke Company merged with the Chartered Gas Light and Coke Company, which was the world's largest gas undertaking until nationalisation in 1949.

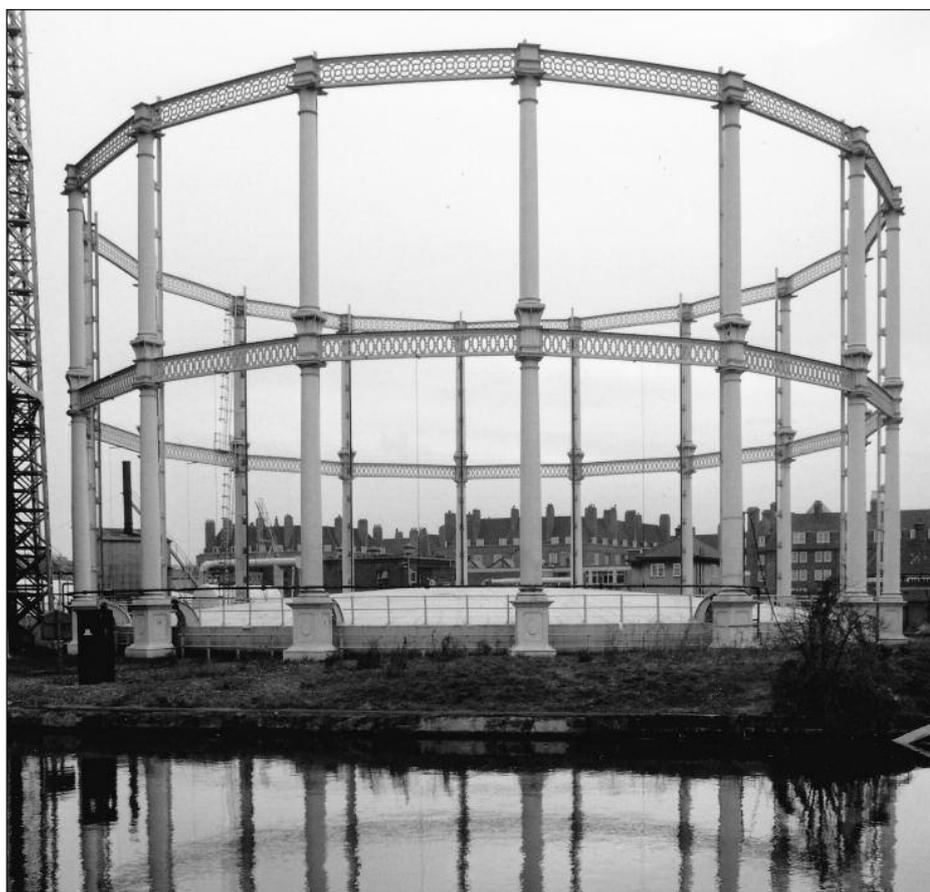
The No 5 gas holder was designed by the new company's engineer, George Trewby, and was completed in 1889. It has a lattice guide frame of 22 steel box-lattice guide standards on a circular

in-ground concrete tank 200 feet in diameter and 50 feet in depth. The elegant tapering guide standards are joined by four rings of wrought iron or steel girders with lattice webs.

At 146 feet, the No 5 is twice the height of the No 2 and makes the dominant contribution to the canalscape. However, the setting of each gasholder is enhanced by the proximity of the other. Furthermore, they are the only surviving adjacent gas holders in London which represent the two main types of nineteenth century gas holder guide frame in London, which was the birthplace of the gas industry and, until recently, the No.2 gas holder was the oldest in operational use in the country.

There were four gasworks along the 8¾ mile long Regent's Canal, which was opened in 1820. The canal's main trade was coal, carried in barges from Regent's Canal Dock (now Limehouse Basin) to supply the Stepney, Shoreditch, Haggerston and St Pancras Gasworks, and numerous coal merchants. Of the few surviving historic gas holders on or near the Regent's Canal, the four gasholders at St Pancras are being relocated on new sites, whereas the two at Bethnal Green are in their original positions. They are also nearest to Limehouse Basin where there are two surviving structures associated with transshipping coal from North Sea collier to Regent's Canal barge.

Furthermore, along the canal between Limehouse Basin and the Bethnal Green gas holders there are structures and buildings associated with the coal trade. At the site of the Stepney Gasworks there are remnants of a coal-handling structure and a coal store and nearby, four reinstated lower parts of gas holder guide frame columns dating from the mid-1850s, which are now probably the oldest surviving parts of gas holder guide frame columns in the world. Surviving next to the canal at Mile End Road is an 1820 house built by John Gardner, who operated a fleet of canal barges carrying coal, timber, bricks and malt. Also, at Twig Folly Wharf, there is London's only surviving canal barge builder's shed. With the exception of the reinstated columns, all these structures and buildings along the canal, together with the two historic gas holders at Bethnal Green, are in the Regent's Canal Conservation Area.



Bethnal Green No 2 gas holder

Photo: Malcolm Tucker

Kilfinan Forest

The volunteers at Kilfinan Community Forest are looking for advice / expertise and for any groups who would be interested in helping them out. The Forest is in Argyll, Scotland. They have the remains of the original water supply system for the town of Tighnabruaic, including dams, two huge concrete water towers and a very large ball cock.

Gas holder No 1 at Hornsey Gasworks: a structure at risk

This is an exceptional structure and a remarkable survival

Colin Marr

Imagine it is 1929 and you are on a train steaming north out of Kings Cross. There is a man in his mid 30s sitting opposite you – he is Barnes Wallis, later to design the Wellington bomber and be knighted and famed for his 'bouncing bombs'. As you pass through Hornsey station he looks out of the window. If he had looked to the left he would have seen Alexandra Palace. But, no he looks to the right and sees the smaller of two gas holders at Hornsey Gasworks. He smiles at its spiral structure with repeating triangular shapes. Barnes Wallis is travelling to Cardington for a test flight of the airship R100, which he and his team had designed the previous year. One of the innovative things about R100 was its structure of repeating triangular shapes! And the Hornsey gas holder, which uses this same structural concept, was built when the great man was only five years old. Perhaps this is fanciful, but B W would certainly have made that journey and with his engineer's sense of curiosity would have taken note of that gas holder.

The truth is Gas holder No 1 at Hornsey Gasworks is a remarkable, innovative and historic architectural structure and it is astonishing that it has remained neglected and unsung for so long. It was constructed in 1892 and is the oldest surviving example of 'Cutler's Patent Guide Framing', which enables a structure using a lattice of vertical guides and helical girders to provide the necessary rigidity with a relatively lightweight and strikingly elegant appearance. Samuel Cutler & Sons of Millwall patented this helical shell concept in 1888. This is not to be confused with conventional rectangular frames with cross-bracing – it is a truly geodesic cylinder. It was thirty years in advance of Barnes Wallis coining the term 'geodesic' for these lightweight structures for airships and aircraft and fifty years ahead of Buckminster Fuller's trendy geodesic domes.

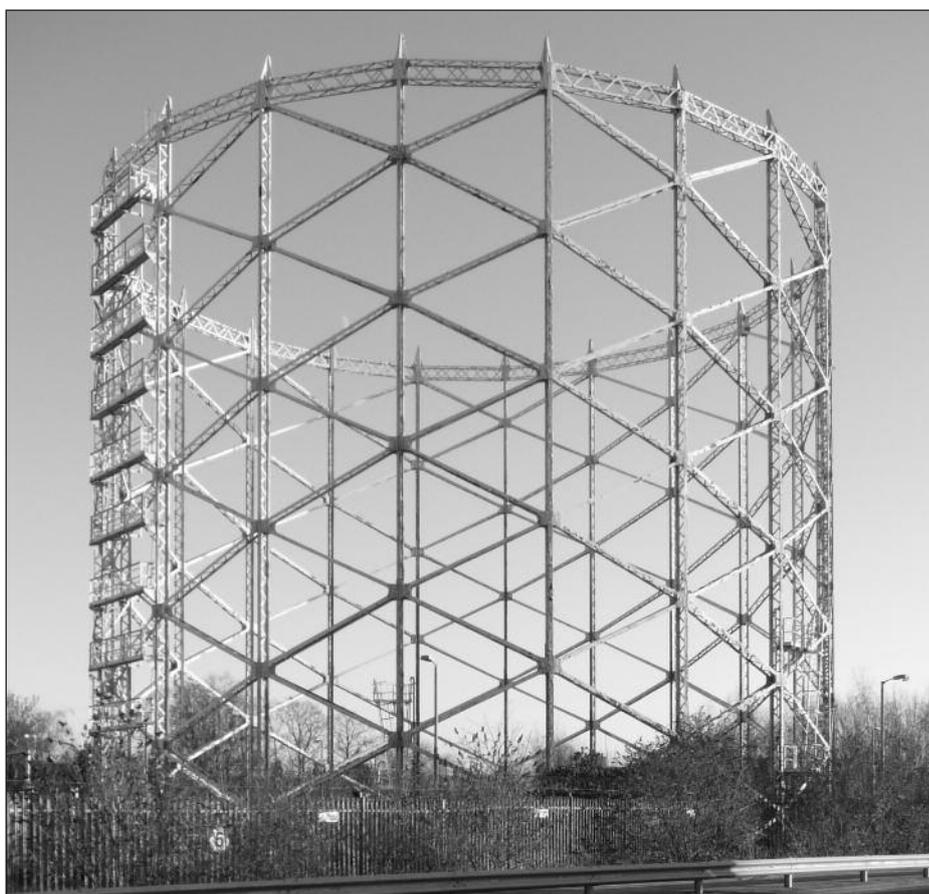
Also, there are significant historical aspects related to the social and economic development of Hornsey and Wood Green. In 1881 the population of Hornsey was 11,000 and in the 20 years up to 1901 it grew by an additional 61,000. Green fields became covered with terraced

houses, each requiring gas. London had the world's first public gas service and the supply companies were well able to meet this huge demand being at the forefront of gas production, storage and distribution. Gasworks and gas holders became common features in Britain's urban landscape. However, with the introduction of North Sea gas and technological developments gas holders have been fast disappearing. We are now at a point in time when almost all evidence of what was once an important industry, which provided significant local employment, will be lost. Retention of Gas holder No 1 at Hornsey would be an appropriate reference point to register the historic significance of this industry and its local socio-economic importance.

Haringey has lost many of its heritage buildings and every opportunity should be taken

to make the most of the high quality historic assets that remain. Sensitive conservation of Gas holder No 1 could provide a powerful and striking landmark building with historic reference in the proposed Haringey Heartlands scheme. The vision here is that the guide frame could form the outer structure of a glass curtain-walled building, as has been done with good effect in Dublin with conversion into luxury apartments.

Why and what's the risk? Well, Haringey Council has deleted Gas holder No 1 from its local list of industrial heritage sites with a view to its being demolished to make way for Heartlands. At the same time English Heritage is assessing it with a view to its being listed. It's in the balance and could be lost.



Hornsey No 1 gas holder

Photo: R Carr

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Newman Brothers, coffin furniture works, Birmingham

Fifteen years after its final closure in 1999, Newman Brothers coffin fittings factory has been opened to visitors. Located in Birmingham's Jewellery Quarter, it is an example of one of the many and varied producers of small metal products typical of the area.

Colin Bowden

Alfred and Edwin Newman first established their business at 102 Irving Street in 1882, but in 1894 relocated to a new works designed by Richard Harley at 13-15 Fleet Street where it remains. At around the same time there was a switch from being a general brass foundry to the production of metal fittings for coffins – handles, plates etc. Production continued until 1999, being varied from around the 1950s by the additional production of moulded resin handles and shrouds. The final closure came only as a result of far eastern competition and the trend from burial towards cremation which brought about an increase in the use of plastic fittings (accumulations of metal in the cremation furnaces were said to be difficult to clear out).

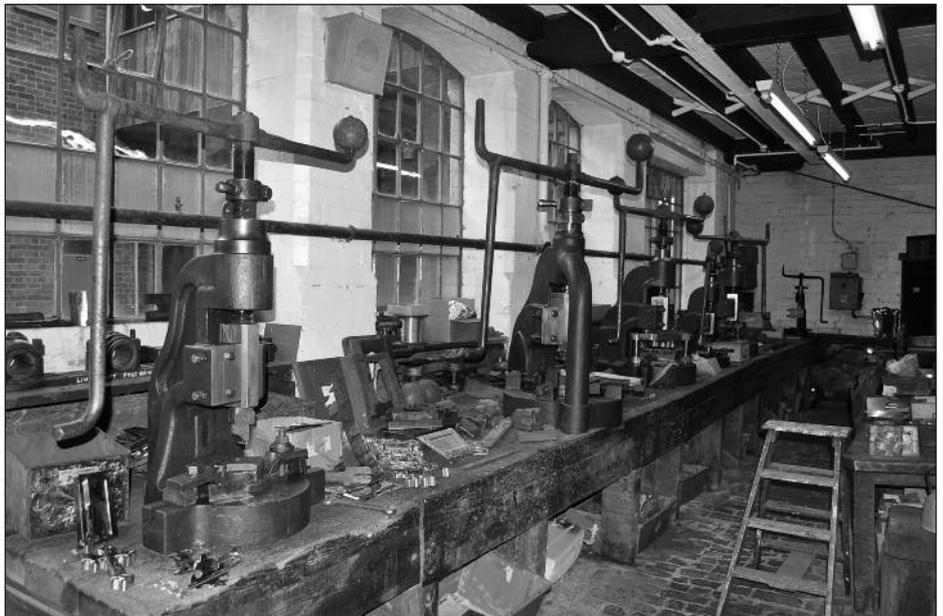
The works still remains largely as originally built, with a building fronting the road and main workshop range extending back at right angles and to the left of a narrow courtyard. Exceptionally, only the original casting shops to the right of this have been replaced by a 1960s brick building. The significance of the site was established with grade II* listing in 2000. Having been sold by its last owner, Joyce Green, in 2004, the works eventually passed into the hands of the Birmingham Conservation Trust in 2010. However, with funding having only recently become available, the necessary restoration work was delayed until 2013-2014.

The works was opened to visitors on 28 October 2014, allowing for a visit on the



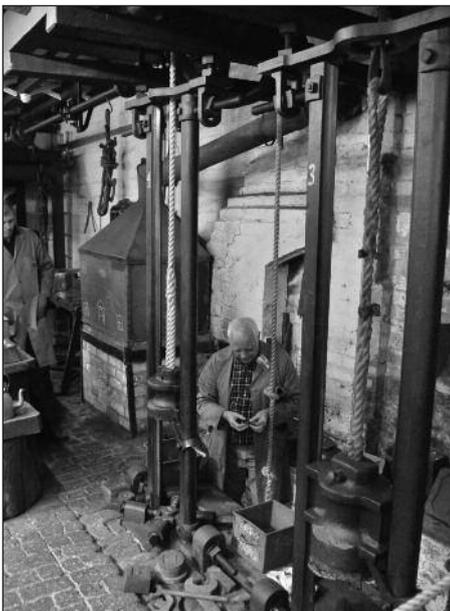
Sewing machines in Shroud Room

Photo: Colin Bowden



Fly presses in Press Shop

Photo: Colin Bowden



Two of the drop stamps in Press Shop

Photo: Colin Bowden

following weekend – on the first tour of the day a very modest number were conducted by a friendly and helpful guide. It seems clear that the preservation of the site has been largely achieved, even if with some compromises. Parts of the workshop range (not open to visitors) have had to be let out to other users, and these included some of the areas referred to in the 2000 listing details – a plating shop with vats and electro-plating equipment and upper floor polishing and finishing workshops with fittings for soldering and line shafting. The plating shop equipment, at least, has been removed for health and safety reasons. However, the Press Shop is intact and includes fly presses, four drop stamps driven by lineshafting and 'the big stamp' (for the production of breast plates). Apart from the last

of these (considered too noisy!), they can be demonstrated to press and cut out small metal fittings. The frontage building served mainly as showroom, warehousing and offices, and on the top floor is the shroud room, with a line of eight Singer sewing machines facing the windows fronting the road.

Most important, for the present at least, much of the ambience of the works seems to have been retained, and all involved in this project are to be congratulated.

The Future for English Heritage

On 14 October Ed Vaizey MP, Minister of State for Culture and the Digital Economy, announced final Government approval for the separation of English Heritage into two organisations.

A new charity, retaining the name English Heritage, will run the National Heritage Collection of historic properties. A newly-named non-departmental public body, Historic England, will be dedicated to offering expert advice, championing the wider historic environment and providing support for stakeholders in the heritage sector. The changes will come into effect on 1 April 2015. The Minister confirmed that the Government will provide additional funding of £88.5m to invest in the National Heritage Collection.

The English Heritage charity will be responsible, under an operating licence from Historic England, for the care of the National Heritage Collection. While all its properties will remain in public ownership, it will be able to make the most of commercial and philanthropic opportunities. The additional Government investment will deal with urgent conservation defects and enable the upgrading of visitor facilities including the renewal of outdated displays.

It was clear from the responses to the Government's consultation on the New Model that there is a great deal of support for Historic England and a clear desire that it should continue to champion England's heritage, providing expert advice, promoting constructive conservation and providing support with research, guidance and grants. No changes are proposed to the current duties and powers in planning and heritage protection.

Earlier the Department for Culture, Media and Sport published its response to the English Heritage New Model Consultation.

Six hundred responses were received of which 222 came from organisations including 66 Local Authorities, and 34 from The Heritage Alliance and its members; 192 came from individuals and the remainder were unidentified. 60% agreed or strongly agreed with the main recommendation to split the existing body.

The Government document outlines the main concerns raised by respondents: these, for the new charity, centred on the inadequate financial information given in the consultation document, the short timeframe for self-sufficiency, increased competition, and whether the charity would retain the function of 'owner of last resort'. In response the Government, having re-tested the assumptions,

published more detail concluding that the financial self-sufficiency is realistic and will not be at the expense of Historic England. The function of owner of last resort will be retained. Contingency plans and an annual reporting process are clarified. The suite of governance documents will contain provisions around public access, free educational visits, support for new acquisitions and maintenance, repair and conservation as well as financial targets. A public consultation is expected to review the new charity well before the end of the eight year period.

On Historic England, respondents focussed on future funding, more responsive services, and the importance of the grant and capacity building function. Accepting these points, the Department states that 'Government and the Commission are committed to continuing the services which are clearly highly valued including research, access to data and archives, technical advice, capacity building, grants and support for heritage at risk'. Government also confirms there will be no reduction to the Commission's budget for 2014-5 and 2015-6. It also expressed 'the expectation that future governments would want to take into consideration the new model in making funding allocations'. Government plans a Triennial Review to consider the role, function and needs of Historic England in more detail in 2016-7.

Exploring the Project based Economy

Commerce, Enterprise and Industry 1650-1900

29 & 30 May 2015 at the Ironbridge Gorge Museum Trust, Coalbrookdale, Shropshire, TF8 7DQ.

A notable feature of the Industrial Revolution was the role played by individual speculators and projectors in the establishment of key industries and infrastructure. This period might be characterised as a 'project-based economy', comprising manufacturing, the development of new transport systems, the greater exploitation of natural resources and the growth of finance for industry. The economy was a mix of both formal and informal networks; built initially from local contacts that often went on to spread across the country. How were local and national networks created? What was the role of skill, knowledge

and learning in the British economy? - and what was the nature of relationships between diverse organisations, technologies and investment?

The purpose of this workshop includes:

- examining the role of business and management in the process of British industrialisation. analysing the development of company organisation, management of infrastructure, finance, professional networks etc.
- evaluating the changing techniques for

calculating cost, profit and return on capital. - re-exploring our understanding of the Industrial Revolution in the 21st century.

CALL FOR PAPERS

Contributions of 30 minute papers are sought from scholars, archivists and enthusiasts.

Please submit your abstracts of no more than 400 words to chairman@a2sn.org.uk no later than 20 February 2015.

Many thanks - we look forward to welcoming you!



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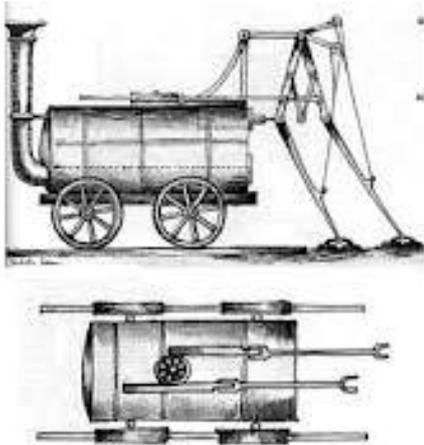


Butterley Gangroad Community Archaeology Project

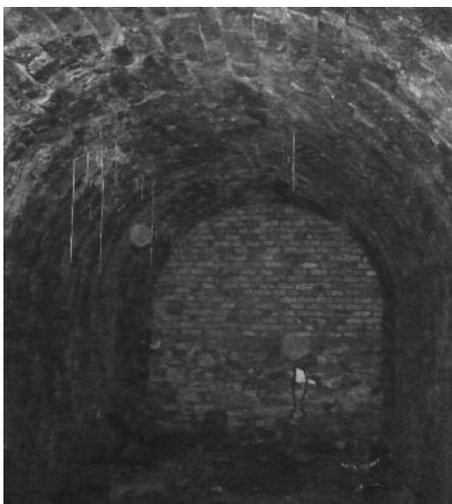
When the Butterley Company set up its blast furnaces at Ripley in Derbyshire in the early 1790s, their engineer Benjamin Outram designed a horse-drawn railway using flanged iron rails and stone sleepers to bring limestone from Crich down to the newly built Cromford Canal at Bull Bridge, where it could be transferred on to narrow boats to be taken to the ironworks. The line was just over a mile long, but it is historically significant as the first of many canal feeder railways engineered by Outram that established the viability of railway transport and laid the foundations for the subsequent development of the national railway network.

Ian Mitchell

A second claim to fame is that the line was the site for one of the early experiments with steam propulsion – William Brunton's 'mechanical horse' of 1813, which propelled itself by a complicated mechanism resembling ski poles that pushed against the trackbed. However, horses remained the motive power until 1870, by which time the line had been substantially rebuilt with conventional edge rails and a significant realignment from parts of the original route.



William Brunton's mechanical horse



Butterley Gangroad – Fritchley Tunnel

After 140 years of operation and 80 years of closure, the line known locally as the 'Butterley Gangroad' has been the subject of a very successful 2 year community archaeology project funded by the Heritage Lottery Fund. The aim of the project was to record the physical remains of the route, search out and interpret the documentary and oral evidence of its history, and increase public awareness through community events and publications.

The most spectacular result was the temporary re-opening of a short tunnel under a public road at Fritchley, which allowed Wessex Archaeology to produce a detailed 3D laser survey of the interior. The key finding is that this is a true 'cut and cover' tunnel and the northern part of it is unchanged from the original construction in 1793. This makes it the earliest surviving railway tunnel in the world (the previous contender was another Outram/Derbyshire example - Stodhart Tunnel on the Peak Forest Tramway, but that is a year or so younger). This claim has now been officially recognised by the Guinness World Book of Records, but more importantly has prompted English Heritage to consider scheduling the structure as an Ancient Monument. Another useful discovery was an in-situ stone sleeper block just south of the tunnel, which has confirmed the original alignment at this location.

However, the bulk of the work has been undertaken by volunteers, surveying the physical remains of the route, capturing oral history from local people who remember the line before and after its final closure in the 1930s, and undertaking documentary research at the Derbyshire Record Office and elsewhere. A remarkable amount of information has come to light, clarifying many details of the line's history which were obscure or misreported in the past, though there are still significant unanswered questions.

Throughout the project, a number of activities have taken place to raise awareness of the line amongst the local population. As well as numerous public walks and talks, including one to several hundred people at the annual Derbyshire Archaeology Day in Chesterfield, there have been specific activities for children, and a very successful 'village day' in Fritchley with an exhibition, local history fair, and a number of history themed activities, including a miniature steam train running on part of the original route.

The final phase of the project focuses on interpretation. A leaflet has been produced explaining the features that can be observed when walking on roads and public footpaths near to the line, and a substantial historical article is published in the 2014 *Derbyshire Archaeological Journal*. A comprehensive archive is being collated and indexed for deposit at the Derbyshire Record Office, with selected material on open access via the Derbyshire Archaeological Society's website www.derbyshireas.org.uk. Planning permission has been obtained to erect interpretative displays at three locations, in Crich, Fritchley and Bull Bridge. At Fritchley the display includes a three dimensional exhibit – a representation of a wagon on a length of track illustrating how the line was converted from the original flanged plate rails on stone blocks to more modern edge rails on wooden sleepers.

The Butterley Gangroad will feature in the talks and field trips at the next East Midlands Industrial Archaeology Conference (EMIAIC 88) on 9 May 2015. This will be held at the Glebe Field Centre in Crich on the theme of 'Transport Innovations of the Butterley Company'. The conference will also cover the other end of the transport route from quarry to furnace – the underground wharf in the Butterley Tunnel on the Cromford Canal known as 'the wide hole' – and the broader involvement of the Butterley Company in early railway construction - booking details are in the diary section on page 24.



Butterley Gangroad – Guinness World Record Certificate

Clipstone – The History and Technology

IA News 171 cover picture showed the great headstocks of Clipstone Colliery and on page 21 referred to the debate over their future. The NAMHO (National Association of Mining History Organisations) December Newsletter contained an extensive article on the history and technology of the colliery from which this article is taken, with many thanks.

Clipstone Colliery, east of Mansfield in Nottinghamshire, dates from the early twentieth century when a new excavation was begun by the Bolsover Colliery Company to exploit the Top Hard coal seam. The company was originally established in 1889 by Emerson Muschamp Bainbridge (1845-1911), mining engineer and, later, well known philanthropist and Liberal politician, in order to extract coal from land owned by the Duke of Portland in Creswell and Bolsover. It was very profitable and by the turn of the century featured in the *Financial Times* top thirty share index. In 1912 the company leased 800 hectares around Vicar Pond at Clipstone where test boreholes located the 2m thick Top Hard coal seam at a depth of 585m.

The sinking of the shaft was interrupted by the First World War but construction work on the surface buildings continued. Sinking resumed in 1919 and by 1922, two 6.4m diameter shafts were complete. The new colliery was operational by 1922, and went on to become one of the most productive in Britain, delivering four thousand tonnes of coal per day by the 1940s. Mining of the Top Hard seam began in 1927 but by the end of World War II the seam was almost exhausted and plans were made for extracting coal from much deeper levels. In the post-war period, the colliery underwent further development to access the Low Main Seam, a deeper seam of coal located almost 240m below the Top Hard.

In common with many pits sunk during the 1920s, Clipstone's steam-winding gear was upgraded in the 1950s. In order to exploit the rich new reserves of coal the 'Koepe' friction-winding system was adopted. Invented in Germany in 1877 by Frederick Koepe, these winders were installed throughout the German and Dutch coalfields from the late nineteenth century onwards. There were a small number in England, but the Koepe system was not widely used until

the post-war re-investment in and re-structuring of the mining industry after 1945.

The Koepe friction hoist system uses a single loop of wire and a powered pulley rather than the more-common winding-drum. Friction hoists are mounted on the ground above the mine shaft or at the top of the headframe. Tail ropes and counterweights are used but are not fixed to the wheel, instead passing around it. The tailropes and weights offset the need for the motor to overcome the weight of the conveyance and hoisting rope, thereby reducing the required horsepower of the hoisting motor by up to 30 per cent. Friction hoists, unlike drum hoists, can and normally do use multiple ropes giving them a larger payload capacity. Friction hoists are also less expensive than drum hoists.

The first British Koepe installation was at Bestwood Colliery, also in Nottinghamshire, but the system proved unsatisfactory and was later removed. Koepe winders were tried with mixed success in several other pits during the 1930s but with the modernisation of Clipstone Colliery in the 1950s the system was perfected. Two headstocks, linked by a central powerhouse were completed in 1953 to the designs of architects Young and Purves of Manchester. The headstocks were constructed by Head Wrightson Colliery Engineering of Thornaby-on-Tees and Sheffield, whilst the winding engines were manufactured by Markham and Company in Chesterfield.

The headstocks when built were the tallest structures of their type in England, and remain today as a highly visible presence in the former mining landscape. Each comprises a latticework steel tower which rises from the side of the central powerhouse building. The upper part of each of the headstocks incorporates twin headgear sheaves – 7.3 metres in diameter – mounted in an 'under and over' arrangement to support the continuous winding rope. The complex was designed to operate two shafts, the No. 1 Service Shaft to the north for colliery workers and the lowering of materials, and No.2 Winding Shaft to the south, designed to raise the coal skips. The two outer heapstead or pit bank buildings enclosed the shaft heads and the surface car circuits which were linked to underground coal and dirt conveyors. When the site was first listed in April 2000, the colliery was

still operational, and the component structures – buildings and headstocks – were structurally complete. Since that time they have suffered vandalism and some deterioration.

The building was designed to house large items of machinery and the electrical equipment needed to power them. The front section of the powerhouse contains two Koepe winding engines, each powered by two direct-coupled electric motors linked to motor generator sets to convert the public AC supply to DC. Adjacent to each winder is a control cabin from which the winding in both shafts could be monitored. The generator sets and switch gear are located on two levels in the rear section of the powerhouse. On each side of the power house are pit bank buildings located above the shafts, into which the winding ropes extend via the headstocks. The shafts are now sealed, but much of the associated equipment including the rails on which the colliery cars ran, and the turntables which allowed them to be manoeuvred, remain in-situ. Both parts of the powerhouse are equipped with travelling cranes and running beams carried on lattice metal piers that facilitated the installation and maintenance of the winders and generators.

Although Clipstone never made a loss, the pit was mothballed in 1993, but temporarily revived in 1994 by RJB Mining (latterly UK Coal) who operated the colliery profitably for a further nine years, during which it produced nearly four million tonnes of coal. In later years miners struggled to overcome adverse geological conditions and the colliery experienced a decline in the quality of its coal. The pit finally closed in 2003.

On 19 April 2000, while the colliery was still operational, Clipstone headstocks and winding house were Listed Grade II, giving timely and clear recognition of 'special architectural or historic interest' and the desirability of preservation.

Nottinghamshire's existing preserved headstocks at Brinsley (not in their original location) and Bestwood, and neighbouring Pleasley in Derbyshire pre-date Clipstone and represent a much earlier form of industrialization, characterised by horse and steam power. By contrast, Clipstone presents the best surviving example of post-war, twentieth century coal mining technology.

Snibston Discovery Museum

Snibston Discovery Museum in Coalville is facing demolition after Leicestershire County Council approved plans to close the facility.

The Council needs to make £120m cuts by 2018 and has said that it cannot afford the museum's £900,000-a-year running costs. It is proposing to sell the existing museum building to developers and create a smaller mining museum in the site's adjoining colliery, which it says will save £580,000 annually.

Brian Voller, chair of the Friends of Snibston, said the facility was of great value to the community through its promotion of the arts, sciences, culture and heritage. He claimed the existing museum had seen its visitor figures rise 15% last year and was worth more than £4.2m a year to the local economy.

Earlier this month the Council rejected an alternative business plan submitted by the Friends of Snibston to run the facility through an independent trust.

The Council said that they had given the Friends ample time and information to develop their proposals over the last year but an independent assessor says that their business plan – which is now on a third version – is not financially viable.

In September, authority leader Nick Rushton had claimed that every visitor to the museum costs £8 in subsidy, a figure disputed by the Friends.

International Committee for the History of Technology in Brasov, 2014

The International Committee for the History of Technology (ICOHTEC) www.icohtec.org was founded in 1968. It aimed to increase international discussion on the history of technology, especially between countries with divergent political systems and divergent historical experiences.

Mark Watson TICCIH GB

ICOHTEC held its 41st annual symposium in Brasov, Romania, one of the Saxon plantation towns at the foot of the Carpathian Mountains that defended Transylvania from the Ottoman Empire. The attractive and historic core made an ideal location for the conference, organised by Prof Elena Helerea and her team in the Transylvania University of Bra ov.

The programme of symposia consisted of four parallel scientific sessions, plenary sessions, excursions, mainly to places that were not especially technological - making it rather different from an AIA meeting. The ICOHTEC approach to the history of technology showed itself to be open-minded, diversified and multidisciplinary and particularly welcoming to doctoral students.

An industrial heritage workshop was organised by Daqing Yang, whose own paper was on the 'heritaging' of industry in China and Japan. He assembled other speakers who covered the heritage of a Spanish eighteenth century brass works and its town; re-use of three sites at Pori, Finland; the relocation of prefabricated marine engine shops in Scotland; the depiction in art of industry and mining in 'hard places'- the American mid-West; and the engagement of urban explorers with metallurgical and mining plants in the Russian Urals.

Outside that session, there were also papers on medical technology (especially mental health), on military matters (testing of bullet proof vests by the Royal Armouries), and a London bus that even now is re-visiting its journey to the Western Front in World War One. The New Industrial Culture Project, science fiction, toy construction kits, vernacular building, Romanian railways and the Kiel Canal were also covered in this eclectic mix. Some of the symposium papers are published on line, at icohtec.org/brasov2014/files/technology-in-times-of-transition-icohtec-2014-brasov-romania.pdf

Future annual conferences will take place in Tel Aviv, followed by Rio de Janeiro and then Portugal.



Brasov tractor factory, built where the pre-war aircraft factory had been, subject of an exhibition displayed at ICOHTEC, now part of a university and business park. Despite the size of the tractor factory, the persistence of pre-enclosure agricultural systems on hill slopes means that scythes, horses and carts are still used.
photo Mark Watson



A water-powered whirl-pool fulling mill that was visited at the village of Lisa. This long-standing family enterprise is representative of the vernacular technology that abounds in Romania.
photo Mark Watson

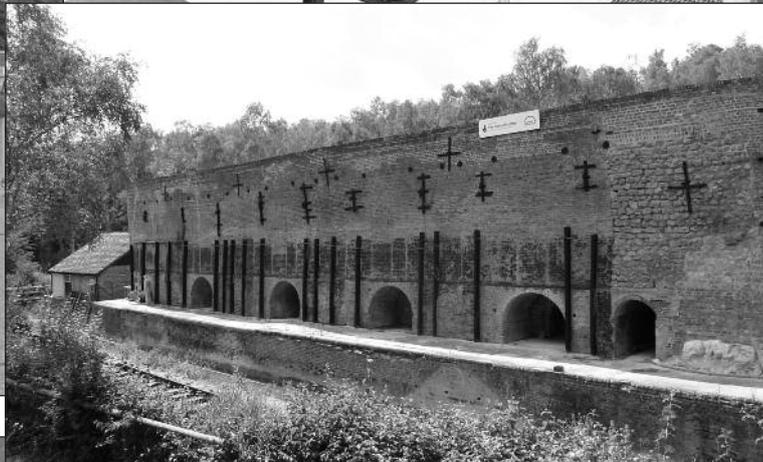
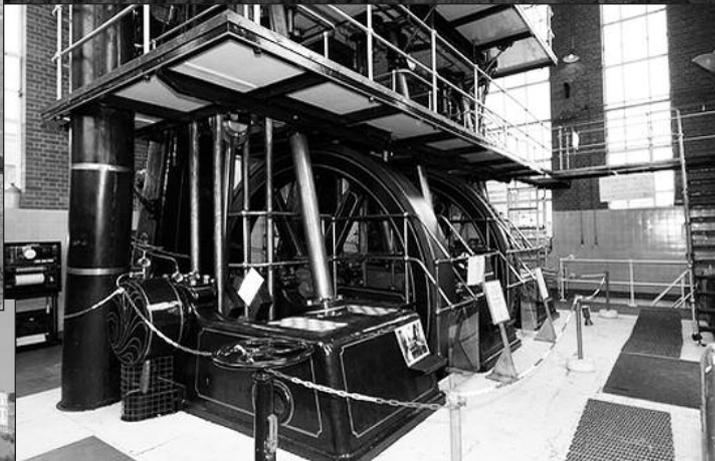
Industrial and Technical Heritage Year

The news on the **Industrial and Technical Heritage Year 2015** can be found at www.industrialheritage2015.eu
– where one can register for a newsletter and to join the discussion forums. There is also a Twitter account: twitter.com/EFAITH2015

A page on Facebook: www.facebook.com/europeanindustrialheritage

A group 'European Industrial Heritage' also on Facebook: www.facebook.com/groups/151455077757/

2015 AIA CONFERENCE Sussex Delights



Clockwise from top:
Jack and Jill Windmills,
Brede Engines,
Amberley Museum,
Bluebell Railway,
Volks Railway,
Hastings Lift.

Sonia Rolt (1919-2014)

I first met Sonia Rolt in 1964 when she and Tom attended the Summer Meeting of the Newcomen Society. This was being held that year in Leeds under the presidency of Keith Gale, who led us on an elegiac tour of the handful of stationary steam engines still working in the West Riding mills. We were together again the following year for the Newcomen meeting in Holland, and thereafter I came to know her well through the activities of the Centre for the History of Technology at the University of Bath.

Only gradually did we learn about Sonia's colourful past as an actress and as a wartime recruit to the contingent of young women enlisted to work on the canal system, keeping vital supplies moving round the country. The initials 'IW' for Inland Waterways on their logo led to them being known familiarly as 'the Idle Women'. Sonia devoted herself to the hard labour of this work and married a canal boatman, George Smith, in 1945. In the same year she met Tom Rolt whose first book, *Narrow Boat*, had just been published and was exerting a powerful influence on moves to reanimate the canal network in the years following the war. Sonia and Tom struck up a partnership in this work, and took a leading

role in the establishment of the Inland Waterways Association in 1946. The IWA achieved much in bringing new life into the canal system, but its early years were marked by acute rivalries that led to Sonia and Tom retiring from the Association and turning to other conservation activities such as the restoration of the Talylyn Railway. In later years Sonia returned to the Association and eventually became a highly regarded vice-president.

Sonia and Tom moved into the Rolt family home, a Cotswold yeoman's cottage at Stanley Pontlarge, near Winchcombe in Gloucestershire, where they brought up their two sons, Richard and Timothy. After Tom's premature death in 1974, Sonia applied herself with characteristic vigour to enhancing his reputation by promoting new editions of many of his books and continuing to support the multitude of conservation projects which they had helped together. She also undertook a wide range of commitments for furnishing National Trust and Landmark properties and supporting local enterprises such as the Cheltenham Literary Festival. With the development of the AIA she became a regular attendee of its Annual Conference in support of the Rolt Lecture that became a prestigious annual event in memory of Tom. She also gave

invaluable assistance to the Rolt Fellowship, established at the University of Bath, of which Tom had been appointed an Honorary Graduate in the year before his death.

Sonia maintained her vivacity and willingness to support good causes to the end of her life. After Tom's death forty years ago, she had the words inscribed on the Cotswold stone of the south wall of their family cottage in Stanley Pontlarge:

IN THIS HOUSE WHICH WAS HIS HOME
TOM ROLT HUSBAND FATHER MAN
THROUGH GOD'S MERCY BY HIS PEN KEPT
US ALL IN JOY FROM HARM

At her funeral in the ancient village church on 13 November it was sad to see these words being eroded by the weather, but the legacy of Sonia and Tom in terms of their vast contribution to the National Heritage will endure much longer. Sonia was awarded an OBE in 2010 for her many years of service in the fields of conservation and industrial heritage.

Angus Buchanan

There will be a memorial event for Sonia in the crypt of St. Paul's Cathedral at 14.30 on 14 May.

David St John Thomas (1929-2014)

David Thomas made a monumental contribution to the early days of Industrial Archaeology, both through his life-long enthusiasm for railway history and by making available to the pioneers of this new field of study in the 1960s the publishing services of David & Charles (the first names of himself and his literary partner, Charles Hadfield). Many budding authors of railway and canal histories found him willing to endorse their projects in the hardback series which he promoted on railway histories (to which he made authoritative contributions himself), canal history (led by his colleague, Charles Hadfield, even though he withdrew from the management of the business), and – most significantly – the innovative series of regional industrial archaeological studies in stylish blue dust-wrappers to which many of the founders of the AIA contributed (John Butt, Angus Buchanan and Neil Cossons, Jennifer Tann, Owen Ashmore and others). There were also associated volumes such as that by Joan Day on Bristol Brass, Keith Gale on the Iron and Steel industries, and Stanley Chapman on Early Factory Masters, and striking journals such as

the yellow-backed *Industrial Archaeology*, later to be adopted by the AIA and taking a new format as *Industrial Archaeology Review* in 1977.

David was born in Romford, Essex, in August 1929 and, at an early age, he was inspired with a fascination for railways by his father, who bought him elaborate model railway 'lay-outs' and equipment. When the family moved to Teignmouth in Devon, where he attended the local grammar school, he became keenly interested in the Great Western Railway. He went on to become a journalist with a wide range of reporting duties which provided plenty of scope for his enthusiasm and he became involved in local broadcasting and business ventures. After meeting Charles Hadfield through the Railway & Canal Historical Society, the two of them set up the publishing venture D&C in 1960. Its first hardback was Hugh Malet's *The Canal Duke*, and in 1964 it acquired premises on the first floor of Newton Abbot Station. Under David's chairmanship the company flourished and grew rapidly until he sold it and moved to Nairn in the far north of Scotland. This was partly to put some distance between himself and the company, although he told me that he

had chosen Nairn as the one-time terminus of the 'Little and Good' Great North of Scotland Railway line from Inverness.

Retirement for David was not a time for relaxation, as he travelled widely in Britain and enjoyed seeing the world on sea cruises with his wife, Sheila, and writing about his experiences in some fascinating travelogues, *Journey through Britain* (2004) and *Remote Britain* (2010). From his base in Nairn he conducted various charities and good causes through the Charitable Trust which he established. Although very interested in it, he never became an active member of the AIA, but he served for several years as vice-president of the Railway & Canal Historical Society and delivered the Clinker Lecture to its Annual Meeting in 2009. In September of the same year he celebrated his 80th birthday with some of his many friends and contacts on a two-day party which included a trip on the Dart Valley Railway, a boat trip down the River Dart, and a splendid dinner at Dartington Hall, to the great enjoyment of all concerned. He died as he might have wished, on board his favourite cruise liner, the m.s. *Queen Victoria*, in September 2014.

Angus Buchanan

AIA Conferences.

The format of the annual AIA conference has remained relatively unchanged for many years. We are always keen to deliver a conference which addresses the wants and needs of our membership.

Enclosed with this newsletter is a questionnaire about AIA conferences. We would appreciate your views, whether you are a regular attendee at conferences, an occasional attendee or even if you have never been to one of our conferences. If you wish to add further comments to the questionnaire please feel free to do so.

AIA Conference 2016

Shropshire is the destination for our 2016 conference which will be based on the Telford campus of the University of Wolverhampton, in Priorslee, about 2km from the centre of Telford. This is a small modern campus with accommodation, meeting rooms, dining and bar facilities, all within a very short distance, with level access and ample car parking. The provisional dates are from 9 - 14 September 2016. The core organising team is beginning to work on planning the programme. We last visited the area in 1979.

All Party Parliamentary Group on the Industrial Heritage

The AIA attends, as an observer, the APPG on the Industrial Heritage which was established in December 2013 and there were two further meetings of this new APPG since the report in IA News 170.

Keith Falconer

The third meeting of the Group was held at the House of Commons on 14 October 2014. It was chaired by the Vice-Chair, David Wright MP and there were two other MPs in attendance plus Lord Faulkner. (Coincidentally the APPG on Heritage Railways was holding its AGM there later in the afternoon.) The AIA was represented by Keith Falconer and Tony Crosby while Ian Bapty was representing English Heritage. Others in attendance represented the Heritage Railway Association, London Transport Museum and Black Country Living Museum and Margaret Faull and Lis Dyson provided support to the Group.

After the usual business aspects the meeting was then given a presentation by Keith Merrin, the Director of Woodhorn Museum. He began with a brief history of the former Woodhorn colliery in the context of the coalmining industry of Ashington and the wider SE Northumberland. He also highlighted other aspects of the industrial history of the NE – the development of the railways and locomotives, William Armstrong, Swann light bulbs, shipbuilding, Turbina and the Nissan car factory to bring the story up-to-date. He continued by pointing out the impact of new uses of former industrial sites such as the conservation and regeneration of the Toffee

Factory in Newcastle, the impact on the visitor economy such as at Beamish and skills development as with the Heritage Skills Initiative involving engineering skills.

With specific reference to Woodhorn – he noted the colliery closed in 1981 and was a museum after closure but deteriorated physically. A £50m refresh of the whole site using grants, including an HLF grant, took place and it re-opened in its current form in 2006. It is a SAM and has 13 historic buildings. It has over 100,000 visitors per year 70% of whom are local. It houses the archives of Northumberland and the Ashington Group Collection (The Pitman Painters), has three temporary exhibition spaces, education space and is at the heart of the local community. The area in which it is situated is a deprived area with high unemployment, health inequalities etc., but has community spirit, so the Museum is engaging with the community offering opportunities for volunteering, skills development, jobs, events, access to the arts and projects for the local community to participate in. These community-led activities attract funding from pots other than the heritage. It is therefore a good practice example of the benefits of the industrial heritage to the local economy, tourism, skills training, well-being, regeneration, employment, education and community cohesion and pride.

During the discussion that followed the Chair asked if there has been any research into the impact of TV and film use of heritage, including industrial, sites as locations on visitor numbers, such as Quarry Bank Mill, Chester Zoo, Black Country Living Museum. Apparently the use of archives for tracing family history peaks after an episode of 'Who do you think you are?'

The fourth meeting of the APPG and second AGM was held on 9 December 2014 at Portcullis House and was again chaired by the Vice-Chair, David Wright MP for Telford. Peter Wakelin then gave a delightful presentation on Industrial Heritage in Wales but although the Local Authority World Heritage Forum was meeting at the House of Commons on the same day and an invitation had been made for members of that Forum to attend the APPG, considering the number of World Heritage Sites in the UK which are industrial, with two being in Wales, the attendance by MPs and Lords was still regrettably thin. The AIA was represented by Keith Falconer, Historic Scotland by Miles Oglethorpe, English Heritage by Ian Bapty, the Association of British Transport and Engineering Museums and the Historic Railways Association were also represented.

Peter Wakelin's talk took the form of a school report, scoring performance and ranging over number of themes. He suggested that the track record for World Heritage Sites, Presented Sites and Industrial Museums merited a mark of 9/10 as the Blaenafon Industrial Landscape provides a great example of how World Heritage Site recognition has transformed people's perceptions as the Welsh Slate Museum, Blaenafon Ironworks, Big Pit and the National Waterfront Museum have

all been recognised internationally. Similarly, Inventory & Record and Protection earned a respectable 8/10 as the work of the Royal Commission and the Welsh Archaeological trusts has ensured that there is now a sound information base and reasonable designation cover.

However Assets at Risk warranted a score of only 5/10 as this has been a challenging area. Some notable designated sites such as the Crumlin Viaduct and the Brynmawr Rubber Factory which was the first post-war building in the UK to be listed in 1990 (and an architectural masterpiece) have been demolished. Similarly, the Haford - Morfa Copperworks has lost much of its value, at Glyn Pits, Pontypool, beam engines are still in place from the 1840s, but the site is in danger of collapse while important cranes and lifts from the slate industry, are now vulnerable and disappearing.

He saw a raft of future priorities including:

- Maintaining existing projects, e.g. Bersham iron working site was formerly open to the public but is now mothballed.

- Adaptive re-use of challenging industrial sites such as Penallta Colliery.

- Creating sustainable ruins: e.g. Dorothea Slate Quarry. If re-use is not possible it is still possible to make the ruins sustainable just as happens with non-industrial sites, e.g. abbeys.

- Creating further World Heritage Sites, e.g. the Welsh slate industry.

He stressed that we must continue to change perceptions; what was previously a problem (preservation of industrial sites) has now become a source of local pride for people. People used to deny they came from some disadvantaged industrial areas. Now they are proud of it.

David Wright thanked Peter Wakelin on behalf of the group and suggested that it highlighted that a balanced recovery needs culture, heritage and the arts all to play a full role and commented that World Heritage Site status has totally transformed Telford and the town's experience was the same as Blaenafon – increased pride. Andrew Bridgen MP said that his constituency in Leicestershire has the highest growth outside the south-east but the county council still wants to shut Snibston museum. This point was re-iterated by Ian Bapty who said the problem of local authorities reducing funding was very real and growing.

The Group will have one further meeting this Parliament when I will talk about European Industrial Heritage Year 2015 and the developing industrial heritage scene on the continent and members were keen that after the Election the Group might visit some of the notable European sites.

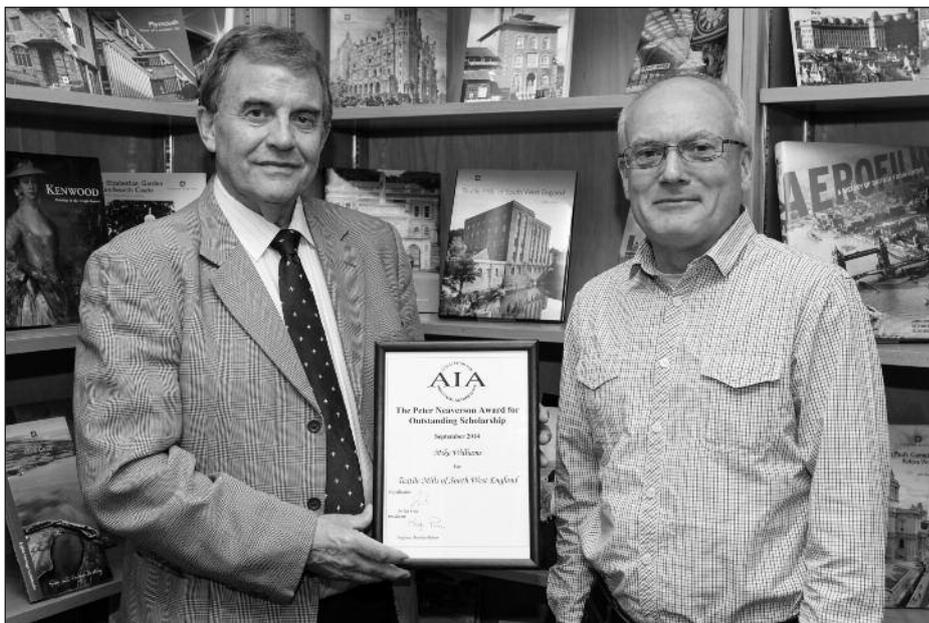
Welcome to our new members

Nicholas Ganley of Little Melton, Norwich.
 Ian Atkins of Sheffield
 Julia Parker of Witney
 E MacDonald of Toronto
 Charlie Fraser-Fleming of Farnborough
 Quentin Laing of Southsea.

Could you be the new TICCIH GB representative?

After six years representing TICCIH in Britain I think it is time to offer that position to someone else. Apart from attending the congresses the main role is to compile or write the national report on the events and trends of the three previous years. TICCIH GB is investigating the options for a meeting within the UK before the congress for those whose international interest in industrial heritage cannot extend to actually going abroad. But will there be sufficient interest? We will also need to confer with ICOMOS UK counterparts, so membership of ICOMOS would be useful.

Mark Watson



Presentation of the Neaverson Award for Outstanding Scholarship by Keith Falconer to Mike Williams for his book Textile Mills of South West England The photo was taken in the waiting room of The Engine House and in the background are several other EH industrial books.

Industry and the Arts in Cumbria

This year's Spring Conference of the Cumbria Industrial History Society is taking a side step from our usual fare - foundries and furnaces, mills and mines - to look at the links between industry and the arts. Go to www.cumbria-industries.org.uk for details

The main speakers at the Shap Wells Hotel near Penrith on Saturday 18 April will be:

- Stephen Wildman** - John Ruskin and the Arts and Crafts Movement
- Ian Bruce** - The Keswick School of Industrial Arts
- Neil Curry** – Norman Nicholson, Poet
- Chris Wadsworth** – Percy Kelly, Artist
- Maddi Nicholson and Stuart Bastik** – Valuing Memories Today

John Ruskin [1819-1900] had a love of Lakeland as intense as his loathing of most aspects of modern industry. With Wordsworth he resisted the intrusion of railways, shuddered at the prospect of the 'lower orders seeing Helvellyn while drunk' and of Manchester turning Thirlmere into a reservoir. While he found much to criticise in the dehumanising effects and avaricious attitudes accompanying mechanised industry, Ruskin had a profound influence on the emergence in Cumbria of a cluster of manufacturing enterprises where the machine was subordinated to hand labour and nature was taken as the chief inspiration for design.

Stephen Wildman is Professor of the History of Art at Lancaster University and Director of its Ruskin Library and Research Centre.

The Keswick School of Industrial Arts began in 1884 as an evening class in repoussé metalwork arranged by Canon Hardwicke Rawnsley and his wife Edith at the Crosthwaite Parish Rooms. It rapidly established an enviable reputation for its hand-crafted metalwork and received many important commissions for the design and execution of ecclesiastical and civic furnishings.

Ian Bruce is a Fellow of the Royal Society of Arts, a lifelong enthusiast for Arts and Crafts, and the author of a published history of the KSIA.

Norman Nicholson – poet and writer - was born at 14 St George's Terrace, Millom in 1914 and that was still his home when he died 73 years later. Almost his entire life was lived in that one small centre of Cumbrian

industry. In 1968 the closure of the ironworks drew from Nicholson perhaps his most trenchant and political poem which set down the environmental issues and the human tragedy that he saw.

Neil Curry is a retired school teacher, writer and poet now living in Ulverston. He was the editor of 'Norman Nicholson: Collected Poems' [Faber and Faber: 1994], and co-editor of a collection of commemorative Essays and Memoirs 'Norman Nicholson at 100' [Bookcase: 2014].

Much of **Percy Kelly's** early work shows his fascination with machinery and light industry – factories, bridges, cranes, boats and cars. He tried to get permission to draw the Workington Docks and Ironworks but was turned away. Almost by accident he gained a foothold at the Sekers Silk Mill at Whitehaven which brought him important patronage from Miki Sekers and the opportunity to exhibit his work, with several galleries eager to represent him. But Kelly was so difficult that the opportunities passed - the biggest problem was his refusal to sell his work and he died a virtual recluse.

Chris Wadsworth was for many years an art teacher but in 1986 opened the Castlegate House Art Gallery in Cockermouth, which quickly became a Mecca for serious art lovers. Since Percy Kelly's death in 1993 she has catalogued and managed the Kelly collection of work, and written two books and a set of trails based on it.

Artists **Maddi Nicholson** and **Stuart Bastik** are the creative force behind Art Gene, based in the former Technical College at Barrow in Furness. They find their inspiration in the interactions between communities, industrial activity and the natural environment.

The conference is open to all and what better excuse would you need to visit the Lake District in the spring? The programme for the day and further information about the talks can be found on our website at www.cumbria-industries.org.uk, or by phoning 01524 762312. The conference fee of £24 includes lunch.

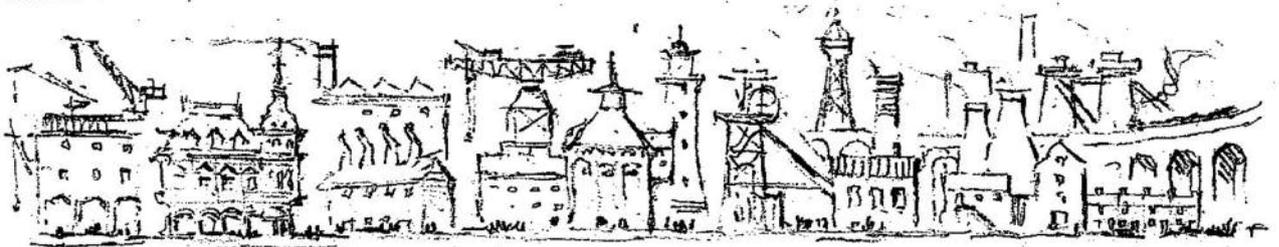
*Roger Baker
 Cumbria Industrial History Society*

Letter from Falcon Hildred

Industrial Britain thrilled me. As you travelled round the country you could usually identify where you were, & what they did there, by what you saw - cranes for a seaport, headstocks for mining, mills & chimneys for a manufacturing town & so on. 19th century industry produced towns landscapes & structures that were shaped precisely to their location & purpose. They were distinctive & visually interesting, often quite sculptural & in many cases beautiful. And they all had integrity.

In modern language we'd call these old industrial structures icons.

These were the tools of a Developing Civilisation just as much as a prehistoric axe



This was the most influential, creative & dynamic period in British history

Sadly, tho, & in my view disgracefully, we haven't preserved examples of each of these structures in their completeness as we have with stately home historic churches, & ruined, but beautifully cared-for castles & abbeys.

As a result, we now have a cultural imbalance, leaving a deficit of examples from the industrial era. And the destruction still continues,



Where is our Minister of Culture? Falcon 23 Dec 2019

Sad news from the Prefab Museum

In March 2014 when I started the Prefab Museum at 17 Meliot Road on the Excalibur estate in Catford, it was supposed to last one month. I certainly didn't expect such a success. Due to popular demand, we managed to stay open a few more months, started to talk to the local authorities alongside the TMO (Tenants Management Organisation) and the local councillors. We even managed to 'secure' the future of the museum till 2017. The Open House weekend at the end of September was wonderful with more than 500 people visiting the museum. On top of celebrating post-war prefab life and showing some art related to the prefabs, we created a warm and homely atmosphere, where everybody was welcome. Some residents became regular visitors and it was usual to see people coming back and bringing friends and relatives.

But not everybody liked it, or liked us being in charge of it, and the adventure ended very sadly at the end of October when the prefab museum was set on fire - I am insisting on the fact that the police have now classified the fire as arson.

With some volunteers and artists we saved what we could from the Prefab Museum on Saturday 29 November. We decided we couldn't run the museum there at 17 Meliot Road any more after what happened. We now feel insecure over there and there is no way I want to expose myself and other people to a potential danger.

After all these years I have spent taking pictures and documenting some of the residents' lives on the Excalibur Estate, I feel very saddened to have to leave this way. I am also very sad that no one living on the estate has been in touch after the fire to express a bit of sympathy. So it's time for me to leave the estate - at least temporarily - and to continue the adventure of the Prefab Museum somewhere else - alongside the online museum. of course, - with some of the wonderful people I met along the way.

The last seven months at 17 Meliot Road were wonderful. There was such a great energy each time we opened the Prefab Museum. We made fabulous, rich and inspiring encounters. All

this couldn't have happened without the help and support of some residents, some of their representatives, the artists and the volunteers involved, and of course the public!

Long live the Prefab Museum, wherever it rises again!

Elisabeth Blanchet

The Rover Safety Bicycle

I was interested to read the short article on the 'Rover Safety Bicycle' and surprised to see it described as 'the first modern bicycle' with a design date of 1888. For three years I have been telling visitors to Nuffield Place that the first safety bicycle was designed in 1885, three years earlier. I based this on the section 'How we got the bicycle' in the Children's Encyclopaedia, which was published at least 100 years ago and consequently was a near contemporary to the development. It states that 'It was in 1885 that two brothers named Starley of Coventry, made the first safety bicycle.'

I would be pleased to see comments from other readers.

John McGuinness

It wasn't our fault gov.

Throughout this summer and autumn anxious eyes have searched the news from the Czech Republic anticipating some incident related to the sites visited earlier in the year by the Heritage of Industry tour party. Nothing was spotted.

This contrasts with two occurrences linked with the 2013 tour to the Ruhr. Three weeks after the Heritage of Industry journey on the Schwebbahn in Wuppertal a complete section of the conductor rail and its supports fell off into the murky Wupper after rebuilding work. Passengers were suspended above the river for three hours and were retrieved by being carried down a huge fireman's ladder, an experience which seemingly caused more anxiety and shock than the long wait.

Then a second event took place in Essen. Opposite the hotel at which the group stayed and across a two lane road was an 18ft. high railway embankment with six tracks on it. Approximately

500yd. of this subsided and vanished out of sight owing to the vertical collapse of a reported total of five coal mining galleries. The important main railway from Essen to the Rhine was closed for six months during complex filling of cavities with concrete.

Terry Evans

Publishing possibilities

I am a commissioning editor for Amberley Publishing in Stroud and I am exploring the potential for a new series of books on British industrial heritage.

The books I have in mind could include over 100 illustrations with accompanying text (14,000-20,000 words). The focus might be on particular sites or types of industrial heritage.

If any members would be interested in discussing this further please contact me.

Alexander Stilwell

Scholarship schemes?

I read with interest the transcription of the Rolt Memorial Lecture in the Industrial Archaeology Review, not least because I am also a long time member of the SPAB with which I believe Tom Rolt was also involved.

The SPAB deals with much older buildings than the AIA, but has a considerably younger demographic in terms of membership. Why this should be is obviously a matter for conjecture, but one of the practical ways in which they encourage the participation of younger members is by 'scholarship schemes' for training both professionals - architects etc - and craftsmen, in the care and repair of old buildings.

This means that their work is both publicised to young entrants to the schemes and the trainees benefit from the knowledge gained and probably work opportunities provided during the scholarship periods.

Perhaps a scheme like this could be something for AIA to consider? There is enough media coverage now of 'heritage at risk' to have created a possible market.

Elizabeth Jones

Heritage of Industry programme Open for booking:

Country House Comfort & Convenience - The North West,
27 - 30 April 2015

AIA Spring Tour - The Rhone Valley, 11 - 17 May 2015

Country House Comfort & Convenience - East Anglia,
1 - 5 June 2015

Itineraries still in preparation, please register interest as soon as possible:

Industrial Explorer Weekend - Sheffield & South Yorkshire,
9 - 12 April 2015

City Safari - Norwich & Great Yarmouth, 17 - 20 September 2015

EHA Conference & Tours, Newcastle, NSW
28 Nov - 9 December 2015

heritageofindustry.co.uk email: info@heritageofindustry.co.uk
Phone: 01235 352275

TICCIH in Lille

The main event of 2015 will be the TICCIH Congress in Lille, Nord Pas-de-Calais, France on 6-11 September. The papers have now been selected. The official start has shifted a little to Sunday evening, so a head-on clash with the AIA conference in Brighton is being eased a little on the French side - but pre and post conference tours are soon to be announced. The venue will be the University of Lille, Faculté de Droit, in the Moulins (mills) district - the former Le Blan flax spinning mills, where adaptive reuse was pioneered by the now very eminent conservation architects Reichen and Robert from 1978 onwards. There will be a short meeting for British participants at that location to clarify voting matters, should there be call for that.

So please let your national representative:
mark.watson@scotland.gsi.gov.uk know if you propose to attend.

Bowbridge Lock – update

With the assistance of a £20,000 grant from the AIA restoration fund work on Bowbridge Lock on the Kennet and Avon Canal is forging ahead.

Clive Field

A week-long Canal Camp visit by Waterway Recovery Group (WRG) and a weekend visit by Newbury Working Party Group (NWPG) has been followed by weekday work carried out by Stroud District Council's 'Tuesday & Thursday Team' volunteers.

WRG's specialist Forestry Team recently removed the fallen or leaning willow trees and other obstructive branches east of the lock. This will allow unimpeded navigation between Bowbridge Lock and Stanton's Bridge.

Despite problems with water ingress and pumping out the lock chamber, much progress has been made within the lock and surroundings. The chamber wall on the offside has been stripped of defective bricks ready for rebuilding. Work has now commenced in stripping the defective brickwork within the bottom gate recess.

The wooden fencing along the towpath side of the lock has been removed for re-use elsewhere. This has created much needed space on the lock side. The towpath wall rebuild is now complete and has had mooring bollards fitted. The towpath along the length of the wall has been re-surfaced.

The Tuesday and Thursday volunteers have cast a concrete cill beam and installed bottom stop planks, allowing the lock chamber to be isolated from Bowbridge Bridge. The teams can now clear any remaining silt, install more scaffolding, and commence the rebuild of brickwork on the towpath side.



Bowbridge lock

Congratulations

In the New Year Honours

OBEs went to: Professor Stewart Brymer Honorary president and lately chairman Dundee Heritage Trust, for voluntary service to Culture and Heritage in Dundee and to **Alexander Hamilton** for services to Maritime Heritage.

An **MBE went to: Dr Richard Hills** a founder of the Manchester Museum of Technology for services to Industrial Heritage.

British Empire Medals went to: Paul William Evans Curator Internal Fire Museum of Power, Tanygroes, Ceredigion, for services to the Preservation and Promotion of British Industrial Heritage and Tourism and to **John David Thomas** For voluntary service to the National Railways Museum.

King Edward Mine HLF award

The Heritage Lottery Fund has awarded more than £1million to a project to conserve the site at King Edward Mine. The money will enable the conservation of all the site's core buildings, refurbishing the derelict Assay Office to become a café and community resource and increasing exhibition space in a former boiler house. The money will also fund two part-time staff for a programme of events, activities and training for schools and visitors. The new facilities will open in summer 2016.

Meanwhile work on site has discovered an abandoned and forgotten dark-room at the mine. Writing, discovered under panelling, read: "This darkroom was designed by H A Burrow and C Hopley and constructed by A Trenoweth assisted by Tom Luzmore". Burrow and Hopley were students at Camborne School of Mines in the early twentieth century when it was based at

KEM. In 1905 both were employed in the Survey Department. H A Burrow was the son of well-known mining photographer J C Burrow, who was based in Camborne. William Thomas, head of mining and Mine Manager at King Edward was himself a keen photographer and accompanied J C Burrow on his field trips to photograph mines above and below ground. The dark-room may well have been provided for his use to prepare teaching aids for the School.

William Thomas also featured in a group of glass lantern slides bought at a sale in September. The three pictures are remarkable in showing Thomas's two daughters and an unidentified group of visitors, including several women, about to go underground. Such pictures are extremely rare. The buyer of the slides, who contacted King Edward for information, has supplied enlarged copies for display at the mine.

Graham Thorne

Historic Environment Scotland

The Historic Environment Scotland Bill was passed unanimously following a vote at Holyrood on 4 November. As a result, a new body called Historic Environment Scotland will be formed, following the merging of Historic Scotland and the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS). It is hoped that the Bill will further simplify the public sector landscape by reducing the number of Scottish Public Bodies.

While the Body is still subject to Royal Assent, it is expected that it will oversee the management and protection of Scotland's historical heritage, and will also have the general function of investigating, caring for and promoting Scotland's historic environment.

Matthew Boulton Memorial

On 17 October, in Westminster Abbey, a memorial plaque was dedicated to Matthew Boulton and placed beside that of his partner James Watt. Born in 1728, he was described by Josiah Wedgwood as the 'the Most compleat Manufacturer in Metals in England'. His partnership with Watt began in 1775. He died in 1809; appropriately the plaque is made of cast iron.

Heritage at Risk Programme

This programme provides a picture of the health of England's built heritage and every year publishes a list of those sites most at risk of being lost through neglect, decay or inappropriate development. According to English Heritage, the 2014 Register is the most comprehensive to date listing sites identified as at risk, and in need of rescue including listed buildings, places of worship, industrial sites, scheduled monuments and archaeology, conservation areas, parks and gardens, protected wrecks and battlefields.

This year, 4.0% of Grade I and II* listed buildings (excluding places of worship) are on the Register, with the proportion varying from 2.2% in the South East to 7.1% in the East Midlands.

Only 15% of building or structure entries on the Register this year are thought to be economically viable to repair which, English Heritage argues, indicates the scale of the public subsidy required.

Those added to the Register in 2014 include, Geevor Tin Mine in the West of Cornwall, Eastbourne Pier in Sussex, Bedlam Furnaces and the shipwreck *Hazardous* (an 18th century warship). Those taken off the 2014 Register include, Langham Airfield Dome in Norfolk; Newman Brothers Coffin Works in Birmingham and the wreck of *Holland No 5* (1902 British Submarine).

Work on historic canalside stables sets off at a gallop

Students from the Scottish Waterways Trust's innovative Canal College have saddled up to help deliver a key aim of Scottish Canals' heritage strategy as work to protect an historic stable building on the Forth & Clyde Canal enters the first furlong.

The project will see canal college students undertake a programme of maintenance and archaeological investigation at Craigmarnoch Stables near Kilsyth. Run by the Scottish Waterways Trust and supported by Scottish Canals, Canal College is a training programme for 16 to 25-year-olds that teaches heritage, environment and employability skills. During the 14-week programme, young people are given the confidence and skills they need to get on the pathway to work.

The work will include vegetation removal and repairs to the stonework of the grade-B listed building and forms a vital part of its ongoing maintenance and stabilisation. In conjunction with Archaeology Scotland, the students will also undertake a programme of archaeological recording and produce scaled plans of the site that will help inform future maintenance work on the building.

Built in the early nineteenth century, Craigmarnoch Stables was once one of a series provided to rest teams of horses that pulled passenger boats along the Lowland Canals, with the animals often staying in better conditions

than the men who worked alongside them. Following the decline of the waterways, the stable fell into disuse and eventually ruin. The building, located some distance from the canal, is actually the second stable to be built at the site. The original block was constructed on the banks of the waterway but sank as the land near the canal was too boggy to support a building of the size required to house the colossal barge horses.

The Seam: Song writing residency at the Institute of Mining and Mechanical Engineers

During the autumn of 2014 the Library at the North of England Institute of Mining and Mechanical Engineers was home to singer/songwriter Gareth Davies-Jones who has revelled in creating new work from the stories contained in this world renowned library.

The world of mining and mechanical engineering is no stranger to song, and there is a rich legacy of music in the industry, which any visit to a mining Gala will confirm. However, this residency is not an historical 'round-up' of mining ballads, but a new approach to telling the story of the library collections through song.

Gareth has been a professional musician for 10 years, and has toured extensively throughout the UK. His first piece is *Practical Coal Mining* which is based on the engineering manual of the same name. 'Looking through the volumes of the 1951 2nd edition, the flow and eloquence of the writing in what was primarily a very technical tome really struck me. It was so very lyrical. The introduction and contents pages in particular appeared to have a rhythm and metre all of their own. *Practical Coal Mining* is a real celebration of the knowledge and skills required to mine in the mid- twentieth century'.

Other themes which have emerged from his research and from chatting to the volunteers who are passionate about the Library's collections include: stories of the subterranean dance halls, the lyricism of adverts of the first edition of *The Mining Journal* in 1836, the debate around the

1883 parliamentary select committee report on a proposed channel tunnel, the 50 year retrospective memoirs of a former colliery manager in County Durham, musings on a fabulous collection of glass plate photographs and much more.

The Seam will be touring the venues in the North East during February.

The National Lottery - 20 years old

The National Lottery was first played in the UK on 19 November 1994. Millions of us sat around the television to see whether our numbers would be drawn.

But whether or not we have been winners ourselves, at the Heritage Lottery Fund they know many thousands who have been. The HLF has distributed over £6bn to 37,000 projects, right across the UK. There has been at least one project, and often many more, in every local authority area. From Burns' birthplace to Yr Ysgwrn, the Giant's Causeway to Stonehenge, Birkenhead Park to the Great Fen, Derby Roundhouse to Birmingham's Back to Backs, York Minster to Canterbury Cathedral, the Great North Museum to the British Museum; all are benefiting thanks to Lottery players.

Good Practice Guide for Local Heritage Listing

This 36 page guide to local listing was first issued by English Heritage in 2012. In the introduction it includes sections on the role of local heritage listing, local plans and the protection of local heritage assets. It continues with the processes of developing selection criteria, identifying assets, creating a list and further necessary considerations. There are numerous case studies to illustrate the process. It is highly recommended for anyone contemplating local listing.

The Guide (Product code 51759) is free to download from the English Heritage website and a printed version can be obtained from their Customer Services Department. Telephone: 0870 333 1181 Email: customers@english-heritage.org.uk

The Railway Heritage Trust

In its twenty-ninth year, the trust has made grants totalling £1.79m to 54 projects, ranging from several major grants in association with the refurbishment of historic stations such as Nottingham, Llandudno, Manchester Victoria and Wakefield Kirkgate, to a grant to erect a historic sign in The Jubilee Refreshment Rooms at Sowerby Bridge. The wide range of projects included, apart from improving passenger facilities, refurbishing the former Parcels Office at Scarborough as an arts studio, providing new catering at Harrogate, supplying a new clock at Frodsham, repainting Gleneagles Station in its historically correct colour scheme, and restoring war memorials at Kings Cross, Bristol, Euston, and Stratford-upon-Avon.



Craigmarnoch stables

Heritage Alliance issues its manifesto

Heritage Alliance, the association of 97 heritage organisations of which the AIA is a member, have issued a 'manifesto' emphasising the benefits of a positive program and calling on all parties to support policies to achieve this.

England's heritage is one of our greatest national assets. From our rich architectural tradition to our distinctive landscapes, our heritage is a source of national pride and an engine of economic growth. It is the envy of the world.

Up and down the country, heritage is already at the heart of planning for a sustainable future. Businesses and communities alike know that restoring what we have in imaginative ways helps to create wealth and jobs at the same time as it boosts the identity of places. It is not so long ago that the wholesale destruction of beautiful old buildings, like St Pancras, could be actively contemplated. There is still much at stake, as the continuing destruction of ancient monuments and high-profile battles to 'save' historic landmarks show. The future survival of heritage still depends on the private, independent and public sectors working together to create the right framework for success.

To realise the power of heritage, we call on all political parties to:

1. Create a positive tax regime for maintenance and conservation

The current VAT regime, where new building is incentivised over the repair, maintenance and

alteration of older properties, creates a perverse tax on conservation and maintenance that subsidises demolition and rebuilding. We call on all political parties to permanently reduce VAT to 5% on the repairs, maintenance and improvement of dwellings in private ownership as permitted under EU rules, a move that would release investment and boost jobs. The unintended consequences of national tax changes on the management of historic assets can threaten their financial viability. We call on all political parties to examine - with the help of our expert membership - the implications of tax changes for heritage enterprises.

2. Put heritage at the heart of sustainable development

We want to see a statutory requirement for local authorities to have access to historic environment services including Historic Environment Record Services. Research shows that looking after heritage can contribute significantly to the challenge of climate change resulting from excessive carbon emissions. National policy needs to recognise the substantial carbon benefits of retaining and adapting older buildings.

3. Secure the protection of our heritage

The new Historic England will be vital to the future success of our heritage. We call on all political parties to commit to making Historic England a success, and to reviewing how well it is working with local authorities, the voluntary organisations, the development industry and

others to ensure proper protection for heritage. We also call on all political parties to support Historic England's capacity building function and, in particular, to promote community learning through its education programme and to maintain the essential skills base. More specifically, we support the adoption of measures, drafted for the Heritage Protection Bill to provide greater interim protection for heritage assets under consideration for formal protection by listing or scheduling.

4. Attract more investment into heritage

The Heritage Lottery Fund has transformed the way we care for our heritage. We call on all political parties to build on the positive return to a 20% share of National Lottery funding for HLF, and to explore opportunities to enhance that still further to meet emerging needs. Heritage Alliance's **Giving to Heritage** project will help local heritage organisations access a wider range of financial resources but we ask all political parties to increase the appetite for philanthropic giving in the heritage sector, through positive public messages and the continued operation of acceptance in lieu and other fiscal breaks. Volunteers make a critical contribution to our heritage donating expertise on top of their own personal fulfilment.

We call on both successor bodies to English Heritage - the new charity and Historic England - to help nurture national and local involvement in heritage.

Berlin Street Lamps under threat

First introduced in 1826, the streets of Berlin were once lit by over 80,000 gas lamps; about 43,500 remain today. While gas lighting once characterized metropolitan centres around the globe, most gas fixtures have been replaced, leaving Berlin among the last bastions and home to more than half of the world's surviving gas street lamps. The lamps themselves, which represent four main styles as well as many unique ones, date from the nineteenth century to the post-WWII era and are both an important element of industrial heritage and a character-defining feature of the urban landscape. But it is also the gaslight, the aura it casts across the darkness of the Berlin's avenues and neighbourhoods that uniquely defines the experience of night time Berlin and is a treasured aspect of life in the city.

The government has called for replacement of the remaining lamps with electrified fixtures over the next eight years, with plans to save only a small number. Over 1,000 have been lost in the last year alone and demolition contractors have been given financial incentives to finish ahead of schedule. Berlin residents, as well as the international community, have been protesting against the loss of the gas lamps, not only because of their social value and cultural significance, but

also because of the questionable rationale for their replacement. Proponents for demolition claim that new lamps will be more cost-effective and ecologically friendly, but opponents counter that proper full-cost accounting, which incorporates a life-cycle-based assessment of all economic, environmental, and social costs, suggests otherwise. The situation represents an important moment for the heritage field to demonstrate the full range of benefits that historic resources provide to society, and the costs associated with their loss. Inclusion on the Watch seeks to raise awareness about the plight of these lamps in Berlin, and to also underscore the need for the heritage field to engage in these types of analyses to better rationalise its cause. The World Monuments Watch list the 'Gaslight and Gas Lamps of Berlin' as an issue of special concern.

London, like Berlin, is under pressure to cut its energy costs and carbon emissions. Most of the city's gas lights have been converted to electricity, but about 1,100 are still burning in the central boroughs and royal parks. In Westminster, for example, the 304 remaining gas lights have been designated 'cherished assets'. The running cost of a gas lantern is several times that of a metal halide or LED equivalent, so the challenge



One of 40,000 gas lamps in Berlin

is to optimise their performance and make them as environmentally friendly as possible. A strategy developed in 2010/11 led to Westminster's gas lanterns getting new mantles and reflectors, time clocks and photocells, among other improvements.

Arkwright Society at Cromford Mill

The Arkwright Society has an interesting programme of meetings for 2015. The subject this year is 'Arkwright and his Contemporaries' and the talks include:

Thursday 12 February – 'ROBERT BLINCOE, ELLIS NEEDHAM AND LITTON MILL' by Chas Arnold.

Litton Mill, notorious for its cruel treatment of workers, was established in 1782 by Ellis Needham and Thomas Frith. The practices came to light thanks to a parish apprentice, Robert Blincoe, who had worked at the mill.

Thursday 12 March – 'STRUTT AND HIS DESCENDANTS' by Adrian Farmer, Heritage Co-ordinator for the Derwent Valley Mills World Heritage Site.

The Strutt family was hugely influential in the Derwent Valley and across the world. Jedediah Strutt helped finance Arkwright at Cromford, thanks to the success of his own innovation, the Derby Rib, and his descendants proved to be equally innovative and freethinking.

Thursday 9 April – 'PETER NIGHTINGALE AND JOHN SMEDLEY' by Jane Middleton-Smith, Archivist at John Smedley & Sons Ltd.

Just 13 years after Richard Arkwright developed the first water-powered spinning mill at Cromford, Peter Nightingale and his associate John Smedley established John Smedley as an enterprise at the original mill in Lea Mills. Over 200 years later the company is still based at Lea Mills.

Thursday 14 May – 'JOHN WHITEHURST' by Jonathan Wallis, Derby Museums.

Born in 1713, John Whitehurst, whose father began making clocks in 1708, became a clockmaker, innovator and renowned scientist, starting his own business in Derby in 1736. Clockmaker, Lunar Society member and friend of the painter Joseph Wright, John Whitehurst lived and worked in Derby for over 40 years making timepieces that were considerably ahead of their time.

Thursday 11 June – 'JOSEPH WRIGHT' by Lucy Bamford, Curator of Art at Derby Museum.

Joseph Wright was one of the most interesting and important painters of the late 18th century. Born in Derby in 1734, Wright remained closely involved with his home town. Ambitious and business-savvy, Wright made his work available to a wider audience by employing the best engravers to reproduce his paintings as high quality prints. His paintings of early industrial scenes and entrepreneurs are well known

Thursday 9 July – 'THE LUNAR SOCIETY' by Rachel West, Soho House Museum.

The Lunar Society was a group of prominent people that some said were, next to the Royal Society, the most important gathering place of scientists, inventors and natural philosophers during the second half of the eighteenth century. The Society met frequently at Soho House in Birmingham, the home of Matthew Boulton who was a founder member of the Society.

All meetings start at 7pm at: *Gothic Warehouse, Canal Wharf, Cromford Mill, Cromford Derbyshire*. Cost: £7.50 (includes cheese and wine 7pm-7:30pm) – *Limited places; advance booking recommended*. For more information phone 01629 825995, email reception@arkwrightsociety.org.uk .

A Celebration of the Tinworking Landscape of Dartmoor in its European Context – Prehistory to the twentieth century

Tavistock, Devon, 6-11 May 2016

The tinworking landscape of Dartmoor is arguably the finest in the world for its extent, completeness, chronological range and accessibility. Although always closely connected historically to the Cornish tin industry, Dartmoor's tinworking landscape is quite distinct, as it lacked the deep tin deposits of its neighbour and also had an abundance of water resources. Dartmoor tinworking was on a relatively small scale. Consequently, archaeological remains of these and earlier periods (especially AD 1300-1700) are still of outstanding extent and quality.

Historically, the industry generated significant wealth for the county of Devon, being ranked as more important than seafaring in about AD 1600. Much tin was exported to Europe and beyond.

Hundreds of hectares of streamworks and openworks survive, served by numerous reservoirs and miles of leats. Ore was crushed and smelted in waterpowered mills, of which at least 100 survive archaeologically. Some 200 accommodation 'lodges' have been identified on open moorland. In the 19th century shafts reached a depth of 500ft (152m), often drained by pumping waterwheels up to 60ft (18m) in diameter, with horse-powered 'whims' used for hauling. The largest mine employed up to 200 men, women and children. The moorland industry survived until 1930 and its last decades included innovative use of water-powered turbines generating electricity. From the 1860s onwards, much was documented photographically.

To mark the 25th anniversary of the **Dartmoor Tinworking Research Group** (www.dtrg.org.uk), and to coincide with the 10th anniversary of the **UNESCO World Heritage** designation of the **Cornwall and West Devon Mining Landscape** (www.cornish-mining.org.uk) this conference, based in the stannary town and World Heritage Site area of Tavistock, from 6-11 May 2016, will comprise lectures and full day field excursions.

The conference will celebrate the diversity of Dartmoor's unrivalled industrial landscape, and will compare its features and technologies with those of contemporary tinworking areas of continental Europe – Czech Republic, Germany, France and Spain, as well as that of Cornwall. Lecturers already confirmed include Dr Tom Greeves, Dr Peter Herring, Dr Phil Newman, Henrietta Quinnell, and Dr Petr Rojik (Czech Republic). A detailed programme will be available on the website of the Dartmoor Tinworking Research Group (www.dtrg.org.uk) from the early Summer of 2015. For further information, email Dr Tom Greeves at tomgreeves@btconnect.com ..

PUBLICATIONS

Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review*.

Bristol Industrial Archaeological Society Bulletin, 143, Winter 2014/15

Dorset Industrial Archaeology Society Bulletin 40, September 2014

Greater London Industrial Archaeology Society Newsletter, 275, December 2014

Hampshire Industrial Archaeology Society Focus on Industrial Archaeology, 83, December 2014

ICE Panel for Historical Engineering Works Newsletter, 144, December 2014

Manchester Region Industrial Archaeology Society Newsletter, 148, November 2014

Merseyside Industrial Heritage Society Newsletter, 335, August 2014; 337, November 2014

Midland Wind and Watermills Group Newsletter, 110, December 2014

Northamptonshire Industrial Archaeology Group Newsletter, 132, Autumn 2014

North East Derbyshire Industrial Archaeology Society Newsletter, 56, November 2014

Piers: the Journal of the National Piers Society, 113, Autumn 2014

Scottish Industrial Heritage Society Bulletin, 72, September 2014

Search: the Bulletin of the South Wiltshire Industrial Archaeology Society, 100, September 2014

South West Wales Industrial Archaeology Society Bulletin, 121, October 2014

Surrey Industrial History Group Newsletter, 201, September 2014; 202, November 2014

Sussex Industrial Archaeology Society Newsletter, 163, October 2014

Sussex Mills Group Newsletter, 163, October 2014

Trevithick Society Journal, 41, 2015

Trevithick Society Newsletter, 165, Autumn 2014

Triple News: Newsletter of the Kempton Great Engines Society, 47, Summer 2014

War Memorials Trust Bulletin, 63, November 2014

WaterWords: News from the Waterworks Museum, Hereford, Autumn 2014

Welsh Mines Society Newsletter, 71, Autumn 2014

Yorkshire Archaeological Society Industrial History Section Newsletter, 92, Autumn 2014

Books

Early Railways 5, edited by Dr David Gwyn, Six Martlets Publishing 2014, 362 pp, numerous illus, drwgs and plans, hardback, £55. Twenty one papers presented at the Fifth International Early Railways Conference held at Caernarfon in June 2012.

This book covers a wide range of subjects, technical, economic and geographic. Topics include William Brunton's walking engines, railways serving the coal mines at Newcastle, New South Wales in the 1830s, the railway constructed at Bell Rock lighthouse and John New's discussion as to whether the first wagonways in Britain were at Wollaton or Broseley.

The Toll Houses of Staffordshire, by Tim Jenkinson and Patrick Taylor, Polystar Press 2014, 148pp, numerous illus, ISBN 978 1 907154 07 2, paperback, £9.95

The ninth in the series which is intended to cover the entire country. Starting with an extensive introduction to toll roads and toll houses the book then describes Staffordshire in detail. The main section of the book is the gazetteer which not only lists and illustrates the surviving tollhouses including those on canals but also lists and in many cases illustrates the very large number which have not survived.

Frank Atkinson

Frank Atkinson, born 13 April 1924; died 30 December 2014, was an inspirational museum director who held firmly to the belief that a museum's collection should not be limited by the size of its doors. Shortly after the launch of his brainchild, the Beamish Museum in 1971, he took delivery of Rowley railway station, lock, stock and barrel. This was followed by a tram track, a drift mine, a Co-op store, East Stanley board school, Eston's medieval church, terraced housing, a fairground carousel, flocks and herds of local sheep and cattle and much else. For a full obituary – Google – Frank Atkinson obituary Guardian Saturday 3 January 2015

SIXTH INTERNATIONAL EARLY RAILWAYS CONFERENCE

16 – 19 June 2016,

Newcastle-upon-Tyne, England

CALL FOR PAPERS



Researchers into the history and archaeology of early railways (defined as those which were pre-mainline in concept if not necessarily in date) who would like to present their findings are invited to indicate their intention to the organising committee by the end of May 2015. A 300-word synopsis should be submitted for consideration by the end of September 2015.

The standard length of papers is 30 minutes, with shorter presentations and papers welcome.

Proposals for papers, which are encouraged on such topics as economic, business and social history as well as on technical subjects, should be sent to: early.railways.conference@gmail.com.

As before, it is intended to publish the proceedings.

Further details on the Conference can be found at:

www.earlyrailways.org.uk

(Image courtesy of Northumberland Archives, ZMD 78/14, 'The Coal Waggon')

2015 EUROPEAN INDUSTRIAL AND TECHNOLOGICAL HERITAGE YEAR

20 – 21 March 2015 CONSTRUCTION HISTORY SOCIETY

Second Annual Conference
Queens' College, Cambridge

9 – 12 April 2015 INDUSTRIAL EXPLORER WEEKEND

Sheffield & South Yorkshire.
See page 18

18 April 2015 SOUTH WALES AND WEST REGIONAL IA CONFERENCE

Petroc College, Tiverton, Devon
brendanhurley@fastmail.co.uk

18 April 2015 INDUSTRY AND THE ARTS IN CUMBRIA

Spring Conference of the Cumbria Industrial History Society
Shap Wells Hotel, Penrith.
See page 16 for details

25 April 2015 SERIAC

Ashburton Hall, Sussex St.,
Winchester, SO23 8UJ.
Hosted by Hampshire I.A Society.
See below for details

27 April – 1 May 2015 COUNTRY HOUSE - COMFORT & CONVENIENCE

The North West. See page 18

9 May 2015 EMIAC 88

Transport innovations of the
Butterley Company
Glebe Field Centre, Crich,
Derbyshire, DE4 5EU
More information from
www.derbyshireas.org.uk and see
page 10

11 – 17 May 2015 AIA SPRING TOUR

The Rhone Valley. See page 18

28 – 31 MAY 2015 44TH ANNUAL SIA CONFERENCE

Albany and the Mohawk Region of
New York

29 – 30 May 2015 EXPLORING THE PROJECT BASED ECONOMY

Commerce, Enterprise and Industry
1650–1900 Ironbridge Gorge
Museum Trust. See page 9

1 – 5 June 2015 COUNTRY HOUSE - COMFORT & CONVENIENCE

East Anglia. See page 18

16 – 21 August 2015 ICOHTEC 42ND SYMPOSIUM IN TEL AVIV

History of High-Technologies and
Their Socio-Cultural Contexts
www.icohtec.org/2015-meeting/
CfP_ICOHTEC-2015. See page 12

4 – 9 September 2015 AIA ANNUAL CONFERENCE, BRIGHTON

6 – 11 September 2015 TICCIH CONGRESS LILLE
Industrial Heritage in the twenty
first century – ticcih-2015.sciences
conf.org/?lang=en. See page 18

Information for the diary should be sent directly to the Editor as soon as it is available. Dates of mailing and last dates for receipt of copy are given below. Items will normally appear in successive issues up to the date of the event. Please ensure details are sent in if you wish your event to be advised.

More Diary Dates can be found on the AIA website at www.industrial-archaeology.org



London bus at Arras – note the pick and shovel

Photo: Mark Watson

SERIAC 2015 South East Region Industrial Archaeology Conference

I. A. Home and Away

Ashburton Hall, Sussex St.,
Winchester, Hampshire
Saturday, 25 April 2015.
Hosted by the Hampshire
Industrial Archaeology Society

Talks will include;
Metalliferous Mining in the
Channel Islands
Howard Sprenger (HIAS)

Flying Boats of Southampton
Colin van Geffen
(Aviation enthusiast & artist)

The Ford Motor Industry in
Southampton
Jon Murden
(Dorset County Museum)

Charles Henry Driver,
Railway Architect
Dr Bill Fawcett
(Railway Heritage Trust)

I.A in Paris
Chris Rule (GLIAS)
Bursledon Brickworks
Dr Carolyne Haynes
(Bursledon Brickworks)

Conference details available on
www.hias.org.uk

Enquiries to info@hias.org.uk or
telephone 01962 855200.

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Final copy dates are as follows:

- 1 January for February mailing
- 1 April for May mailing
- 1 July for August mailing
- 1 October for November mailing

The AIA was established in 1973 to promote the study of Industrial Archaeology and encourage improved standards of recording, research, conservation and publication. It aims to assist and support regional and specialist survey groups and bodies involved in the preservation of industrial monuments, to represent the interests of Industrial Archaeology at national level, to hold conferences and seminars and to publish the results of research. The AIA publishes an annual Review and quarterly News bulletin. Further details may be obtained from the Liaison Officer, AIA Liaison Office, The Ironbridge Institute, Ironbridge Gorge Museum, Coalbrookdale, Telford TF8 7DX. Tel: 01325 359846.

The views expressed in this bulletin are not necessarily those of the Association for Industrial Archaeology.