

INDUSTRIAL ARCHAEOLOGY NEWS

174
AUTUMN
2015

THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

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INDUSTRIAL ARCHAEOLOGY NEWS 174 Autumn 2015

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COVER PICTURE

The newly restored Stevenson Scalasaig light. The view is looking out over Scalasaig from the island of Colonsay. Restoration of this early Stevenson cast iron light was funded by an AIA restoration grant.

Congratulations to our President

I'm sure all members would like to join in congratulating our Honorary President Professor Marilyn Palmer in her being awarded the MBE in this year's Queen's Birthday Honours for 'For services to Industrial Archaeology and Heritage'.

Besides all the other work which has been recognised in this award, Marilyn has given

immense service to the Association, joining in its early days and being elected to the Council in 1979. She served as Chairman from 1986 to 1989 and was joint editor with Peter Neaverson of the IA Review for nearly 20 years until 2001. She became Chairman again in 2004 and was elected Honorary President in 2010.

Forth Bridge now a World Heritage Site

When the World Heritage Committee met in Bonn, Germany, in July 2015 it discussed and added 24 cultural sites to the world heritage list: others being rejected, deferred or referred. A quarter of these newly-inscribed cultural properties are industrial or transport-related, themes still stated to be under-represented on the list.

The Forth Bridge (United Kingdom)

Its distinctive industrial aesthetic the result of a forthright and unadorned display of its structural components. 'The Nomination should serve as an example. It is short, precise and convincing' (said Germany); 'we are inspired and encouraged to see the possibilities of such a significant site as the Forth Bridge on the world heritage list' (Jamaica); 'an outstanding structure of the nineteenth century, an example of human ingenuity and labour. We further congratulate the UK for the conservation of this bridge that allows continuous use since its inauguration in 1890. The World Heritage will certainly be improved with the inscription of the Forth Bridge' (Portugal). Historic Scotland wrote the nomination and was represented there by Miles Oglethorpe and Mark Watson. This is the first successful UK nomination since 2009.

The other listed industrial properties were:

Rjukan-Notodden Industrial Heritage Site (Norway)

Hydroelectric power plants, transmission lines, factories, transport systems and company towns

in a dramatic landscape of mountains, manifest an exceptional combination of industrial assets and themes of new global industry in the early twentieth century.

Speicherstadt and Kontorhaus District with Chilehaus (Germany)

Built on a group of narrow islands in the Elbe, Hamburg, a coherent ensemble of port warehouses (300,000 m²) exemplifies rapid growth in international trade between 1885 and 1927.

Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining (Japan)

Considered the first successful transfer of Western industrialisation to Asia.

Aqueduct of Padre Tembleque Hydraulic System (Mexico)

1530-1560, the highest single-level arcade ever built along water catchment attributes.

Fray Bentos Cultural-Industrial Landscape (Uruguay)

Illustrates the whole process of meat sourcing, processing, packing and dispatching, at a company town.

Mark Watson



39th session of the UNESCO World Heritage Committee

The 2015 AIA Spring Tour to the Rhône Valley

Another highly successful tour organised by Heritage of Industry and led by Sue Constable. This report is the work of Bill Barksfield (Tuesday), Barry LeJeune (Wednesday), John Copping (Thursday) and John Porter (Friday and Saturday).

This year's tour started in London with the usual trip to Dover and a ferry crossing to Calais, where one can now see the large encampments of migrants from further south hoping to get to the UK. This was followed by an afternoon's drive to our overnight stay in Reims.

On Tuesday we headed further south, arriving eventually at the Royal Salt Works at Arc-et-Senans, about 80km south west of Dijon.

Under the protection of Madame du Barry, Louis XV's mistress, Claude-Nicolas Ledoux was appointed as architect to design a new salt works near the royal forest of Chaux. His first design was a very grandiose vision, square in plan, which was immediately rejected as not meeting technical requirements and not suiting the geography. A few months later however he submitted a second scheme which is the semi-circular design seen today: a magnificent entrance building flanked by two inward curving wings with two square buildings at the ends of the curves meeting, on the diameter, a central, imposing Director's Residence with salt making buildings on either side. Each of the salt making buildings is 80m long, 28m wide, and 20m high.

Brine flowed from Salin les Bains, 17km away, in an underground brine duct made from tree trunks (as it was easier to transport brine than trees). The brine arrived first at the wooden graduation building, 800m from the main works, where the concentration of the brine was increased by several cycles of evaporation, using the wind.

The arrival of new technologies at the end of the nineteenth century meant that the site was closed for production in 1895. The graduation building is long gone and the rest of the site was abandoned, looted and damaged by fire. Interspersed with periods of use for other purposes, it was the subject of three restoration projects in the twentieth century and is now a UNESCO World Heritage site.

One's first impression is of the sheer scale of the site and the buildings. But inside there is no machinery and precious few artefacts and it needed a guide book and the interpretation displays to make sense of this magnificent building.

Silk and Steam were the themes of Wednesday's programme. It was Louis XI who decided in 1466 that Lyon was the city in which to establish the French silk industry. Initial progress was slow, and it was not until the sixteenth century that a great expansion of silk production occurred.

We visited three sites. The first, at 21 Rue Richan, had something of the internal appearance of a Glasgow tenement building, with individual



Salt works at Arc-et-Senans – Inside the west salt making building, now used as an exhibition and performance space



Salt works at Arc-et-Senans



Le Train d'Ardeche

workers' accommodation provided on site. Upstairs, in a separate room, was the weaving workshop, with two large Jacquard looms and a third, smaller ribbon loom, brought from another workshop. The Jacquard loom uses punch cards to control bobbins linked to the flying shuttle and so produces a variety of intricate silk pattern designs. The workshop at Rue Richan produced narrow loom products, especially metal thread lace ('galon' in French) used for military uniforms, in the furniture trade and for religious vestments. The works' last owner, Madame Henriette Letourneau, was a master (mistress?) of her trade. She was born in an apartment on the site in 1912 and retired in 1978. The premises were eventually saved by 'Soierie Vivant', formed in 1993 by a group of former weavers, academics and others, dedicated to preserving the heritage of the Croix Rousse district and working examples of its technology.

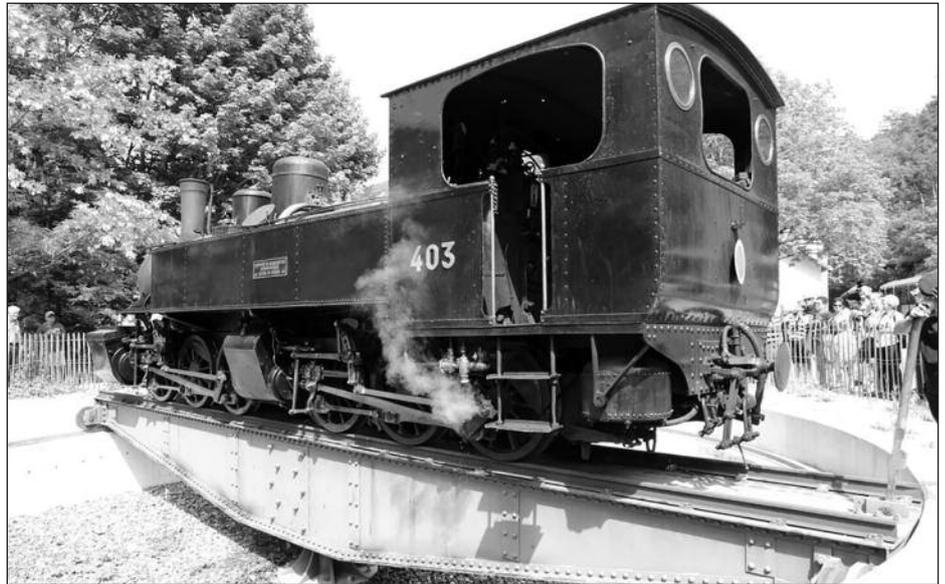
The second workshop visited was in nearby premises in Rue Lebrun. This was a smaller establishment, providing two looms and living accommodation (two rooms) for just one family. One of the machines is a hand loom from the nineteenth century and the other a 1950s power loom. These were used on the site by the Ressicaud family for the production of large fabrics, again using the Jacquard punch cards.

Final stop on the silk trail was L'Atelier du Soierie, just off the Place des Terreaux in the city centre. This is very much still a working commercial business, producing printed silk fabrics. It has been in operation since 1895, through five generations of the same family. Originally the silk designs were block printed; now screen printing is used. We were shown both processes; and one for producing painted velvet material, using silk and rayon.

The afternoon brought a change of scene; some country-side fresh air, breath-taking views and a heritage steam railway. Our destination was Le Train d'Ardeche. This metre-gauge line – a surviving section of a once much larger network – runs from Tournon St. Jean in the Rhone Valley to Lamastre in the Doux valley – a distance of 33km. Originally opened in 1891, the line closed in 1968. It re-opened as a heritage line the following year.

The attractions of the journey are two-fold: the use of one of the original Mallet steam locomotives built for the line in 1903 and itself a 'Monument Historique', and the scenery. The train hugs the side of the narrow gorge, giving magnificent views of the natural features, the highly impressive railway engineering and other man-made features including road viaducts, a Roman aqueduct and a hydro-electric plant. At the terminus came an impressive piece of railway operating theatre, as the locomotive is turned on the turntable by hand (or rather leg) power by the driver and fireman with much snapping of cameras and a round of applause when the task was completed.

Everyone was up early on Ascension Day, a public holiday blessed with lighter traffic than on previous days. If Lyon is the French equivalent of Birmingham then St Etienne is their equivalent of



The turntable makes railway theatre



Winding engine at Musee des Mines



Ribbon making at Maison des tresses et lacets



Ribbon loom at Musee d'Art et d'Industrie

Coventry, producing likewise woven ribbon, cycles and small arms.

First stop was the Maison des Forgerons, a former sizeable forging shop adapted with some flair to serve as a heritage centre for the industry. Several modes of interpretation were incorporated including interactive displays, 'shop-windows' showing typical processes with the metal somehow appearing red hot despite no heat, a wide selection of forging plant and tooling, a mini-cinema with an explanatory film, in French but, fortunately for some, at O-level standard. Many found greatest interest in the mezzanine display of a wide range of related artefacts contributed from the local community, including for instance piecework tallies from the First World War.

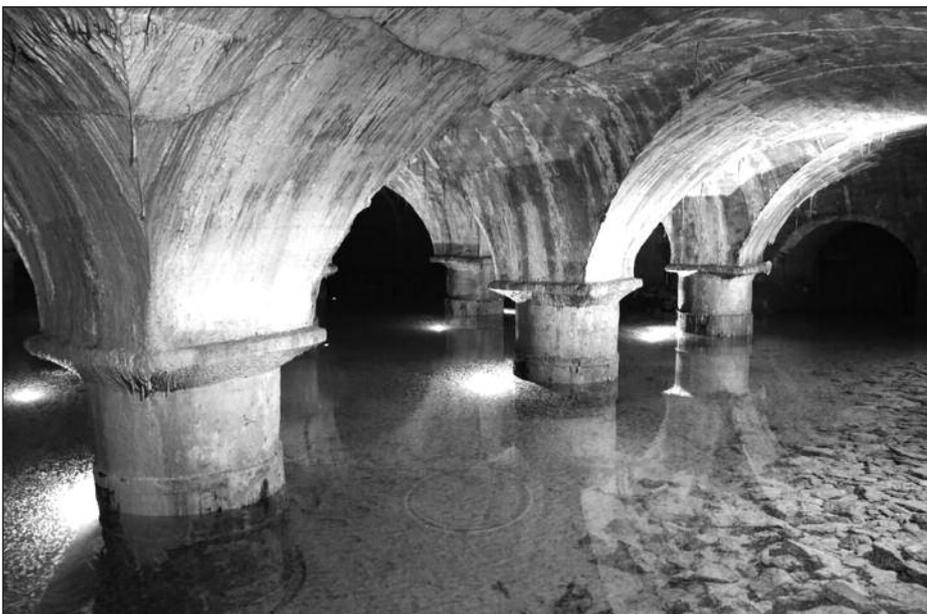
Some were impressed that St Etienne had



Driver's position on the Cornish engine

decided as early as 1833 to create a museum, initially the Palais d'Arts, but as early as 1889 renamed the Musee d'Art et de l'Industrie. While some of the group, without conspicuous gender bias, opted for arms or ribbon, many settled for the ground floor, which meant bicycles, in the broadest sense. There was some conjecture about Boris's reaction if the citizens of London took to the unicycle of William Jackson (London, 1870) which one 'rides' from a 'chaise' suspended within a wheel five feet or more in diameter.

Another example of an industrial site converted to a visitor attraction was Puits Couriot, now the Musee des Mines. The above ground industrial buildings have been adapted to accommodate the conventional aspects of such a museum – cross sections of the geology of the area, the configuration of shafts and stopes, plus



The underground cisterns at Lyon

access routes to and from the site of both coal and spoil. The complexity of the passages underground was well illustrated by a perspective downward through a series of nets coloured to reflect the nature of each successive level. A remarkable feature was the complex and clearly expensive sculpture, erected shortly after the first war, recognising the contribution of the workforce during that difficult period. The white tiled ablution block had been used to re-create in a suitable way the atmosphere of the complex as a workplace, particularly of a community who worked, day after day, having placed their own safety in the hands of their work-mates. Two or three of us found this 'sculpture' of a couple of hundred sets of clothing suspended high in the locker room, many made complete by a couple of hanging sticks of kindling representing 'sabots', highly evocative of the spirit of community of miners worldwide.

Final visit of the day was to the Maison de Tresses et Lacets on a tributary of the Gier that accommodated fifteen water powered mills within just a few kilometers. We were first shown the leat, served by a small dam a hundred metres up the valley. This empties into a substantial cistern to provide a workable head of water during dry periods. It was a surprise then to be shown into the workshop which still makes commercial product using water power alone. Whole banks of mechanical looms, already set up, were put into motion in an instant and rolled off a few metres each of braids and trimmings for fine clothing, lingerie or upholstery. No manual labour is involved today, other than to set up each new braid, to reconnect broken threads, replace empty bobbins and of course to open the water sluice.

There were three memorable aspects to our visit to the Caluire Water Works on the Friday. The first was the extent of the Roman works which supplied 45,000 cubic metres of water per day to Lugdunum through 22 kilometres of aqueduct. All this was lost with the demise of the Romans in the fifth century; perhaps 10,000 tons of lead piping (much of it British lead) was too much of a temptation for the felons of the day! By 1853, Lyon was struggling for water, and a private company was formed to take water from the River Rhone. This raised the eternal problem of water quality and the solution was the second aspect. Covered tunnels were dug alongside the river allowing the river water to percolate in to them through the rock. This achieved the necessary cleansing effect and the resultant storage reservoirs were in use till 1976. We were able to visit such a cavern – a very impressive sight.

The third aspect was the comparatively rare use of Cornish pump technology in a region not dominated by the British and, in particular, exiled Cornishmen. Three Cornish type pumps were installed in 1856, one for the high service to the upper parts of the City, one for the lower areas nearer the river, and a third, which could act as a standby for either. These pumps were made at the iron works in Le Creuseot, not far north of Lyon, and worked till 1910. Two were eventually

scrapped in 1939; the other has been a Historic Monument since 1991.

Each engine and pump unit was comparable in size and layout to the 1846 built, 90 inch engine at the Kew Bridge, but it was the detail differences that were so interesting. We moved on to have a quick look at a hydro-electric power plant in a barrage across the Canal de Jonage, containing 15 Kaplan turbines still at work 116 years after being commissioned. Unfortunately, as a working plant it could not be visited, so we quickly moved on to the site of a younger factory (1925) for the manufacture of artificial silk. The Art Deco office block has been adapted for modern use, but most of the production area has been torn down. In its day, the Textile Artificiel de Sud Est (TASE) had employed 3000 people.

The former workers' village has survived, including its social centre, la Boule de Soie, where we had a splendid lunch with never empty bottles of wine, crammed in at tables in a very Gallic atmosphere. The only thing that was missing was the blue haze of the Gaulloise!

Fortunately, our next visit was more than an hour away, in the small town of Oyonnax, close to the Swiss border. The town has recorded how its industry has adapted itself to changing markets and raw materials in a museum that currently occupies part of the municipal culture centre. The cottage industry started in the nineteenth century using wood and horn to make combs and hair features by hand. The advent of plastics enabled such things to be made more cheaply, the use of celluloid to make combs having been pioneered here, but fashion changed in the 1920s and other outlets had to be sought. This led to spectacle frames, crockery, kitchen-ware and so on. The final display showed just how much modern phones, computers, cars, etc., are dependent on their plastic frames and cases.

The cottage industry was not appropriate to these developments and this evolving trade had been catered for in 1904 by an enterprising electricity company seeking to expand its market by putting up a building with rooms to rent, each with electrical and mechanical power laid on. Since the workers were, by now, processing celluloid with its attendant problems of fumes and fire risk, ventilation and central sprinkler systems were all-important, and must have been a factor in the building's strange title 'La Grande Vapeur'. The building was in full use till the 1940s.

The long journey home was broken by a visit to Le Creuseot on a sunny Saturday morning. Saturday morning it may have been but the whole atmosphere was one of tranquillity, quite belying the history of this key industrial area and the two visits by the RAF in 1942 and 1943. Iron founding started here in 1785 with input from John Wilkinson, followed in 1795 by the transfer



Usine Hydroelectrique de Cusset



Glass cone at Le Creusot

of the royal crystal factory from Paris. It was owned up to 1840 by the Englishman, Aaron Manby with his manager, Daniel Wilson in charge. Evidence of the Manby period remains in workers' cottages built in the Welsh two-level style. The Schneider Brothers arrived in 1837 and bought Manby out. By 1920, there were 20,000 employees including, surprisingly, 2500 Chinese. The crystal works had closed in 1832 and the Schneiders turned the site into their grand mansion, only retaining two glass cones, one turned into a theatre, the other a chapel. Le Creuseot became a company town.

The general steel industry collapsed in the 1980s but high-end manufacture continues under the banner of Acor-Mittel. The forgings in key areas of modern nuclear power plants almost certainly came from Le Creuseot. We had an overview of the whole town, with a local guide, from the hills around, then took in the preserved 1877 steam hammer and some lunch, before heading north for an over-night stop in Reims and the ferry.

All photos Bill Barksfield

VISIT THE AIA WEBSITE
www.industrial-archaeology.org

Heritage in Australia

In advance of the Heritage of Industry tour of Southern New South Wales in November this article attempts to impart some knowledge of what is going on in Australia in the heritage community for the benefit of those in the UK and other places distant from Australia who might not be familiar with our environment.

Owen Peake, Melbourne, Victoria, Australia

The heritage community in Australia is complicated by the fact that we are a federation of six states and two territories. The Constitution requires that all functions of government are divided up with some key portfolios such as Defence, Treasury, Foreign Affairs, and Customs and Border Protection being Commonwealth responsibilities while everything else is the responsibility of state and territory governments. Furthermore, the states and territories don't necessarily see eye-to-eye on many things. At present we have four Labour governments and four Conservative governments in the states and territories and a coalition Federal Government consisting of Liberals (not very) and National Party (better described as Country Party). So you can see that there is plenty of room for political arguments!

Each state and territory has a Heritage Act (or similar name) which attempts to protect registered properties in the jurisdiction. These acts are similar in form but not identical which complicates things on a national basis. Registration under these acts is about the only way to protect sites and many thousands of sites are registered. There is also a system of 'heritage overlays' in the planning schemes of local government councils but this process has only a modest impact on the decisions taken for any particular site.

There is also Commonwealth legislation along similar lines but this primarily applies to lands owned by the Commonwealth such as its major institutional sites and other Commonwealth land including Defence land. The Commonwealth Government has been cut back so brutally in recent times that there is little hope of the government department involved being able to do much with its miniscule resources. It does, however, keep an Australian National Heritage List and keeps an eye on World Heritage matters relating to Australia.

Registered sites can include Aboriginal & Torres Strait Islander heritage sites, natural heritage and built heritage. Industrial Heritage and Engineering Heritage are not well represented in these lists and are lumped in with other built heritage sites.

Public funding has been progressively reduced for heritage matters over recent decades and is now vanishingly small. There is no concept similar to your Heritage Lottery Fund. Hence the volunteer organisations do the best they can to fill the gap whilst recognising that funding by volunteers limits what can be achieved.



McKillops Bridge in the high country near the Victorian New South Wales border. The bridge crosses the Snowy River and is an early electrically-welded steel bridge built in 1936.



The pole on which the final joint was made on the Overland Telegraph Line in 1872. The line running from Darwin on the north coast to Adelaide on the south coast covers just under 3000 km completed to telegraph connection between England and Australia reducing communications time from months by ship to hours by telegraph. The joining point is in the middle of nowhere about 500 km south of Darwin and about 1 km off the also iconic Stuart Highway. Iron poles were necessary as wooden poles were rapidly eaten by ants.

I have no idea how many organisations might be involved in heritage conservation work but it is certainly thousands. The largest players in this space are the National Trusts. There is a branch of National Trust of Australia in every state and territory. Of course the National Trust is primarily interested in architectural sites. There is an active ICOMOS branch in Australia, again with principal interest in architectural subjects. There is a strong group of railway heritage groups such as the Australian Railway Heritage Society which has divisions around the country.

You may be aware that in Australia a single professional body Engineers Australia (EA) represents all disciplines of engineers as opposed to the discipline-specific institutions which represent the engineering profession in the UK. Engineering Heritage Australia (EHA) which is a branch of EA has nine groups around the country.

At the other end of the scale there are Historical Societies in thousands of communities, right down to small towns and villages. There is a network of museums ranging from national museums, state museums and some large

specialist museums in addition to a vast number of small private museums with all manner of specialities. All the museums collectively make a significant contribution to the conservation of 'moveable' heritage in particular but have limited interest in larger 'sites'. Libraries and public records offices are also important repositories of historic material but most are government funded and are hence in decline.

So what sort of activities do the volunteer organisations typically undertake? Let me take Engineering Heritage Australia as an example. At any time there are a number of conservation projects under way at various sites around the country. There are regular publications (similar to

this magazine) and irregular publications such as articles for newspapers. There are educational projects such as training courses, continuing professional development lectures, guided tours and the writing of practice notes.

Public outreach is important with ceremonies being held (14 last year) around the country to unveil recognition markers and interpretation panels. Considerable research is undertaken as sites are discovered or become threatened or are prepared for formal heritage recognition by the writing of nominations.

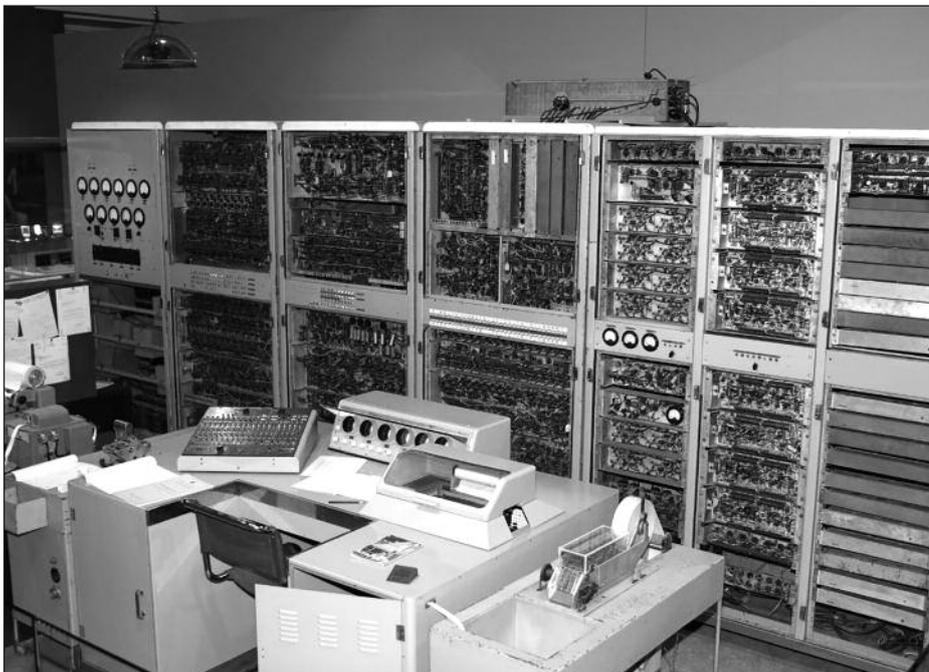
EHA has a program to keep in contact with like-minded bodies both in Australia and internationally. EHA also gives advice to owners

of heritage properties and to the state heritage offices.

Perhaps the jewel in the crown is an engineering heritage conference every second year at different locations around the country.

The structure of the heritage community in Australia is complex and most of it is constantly under pressure to do more with fewer resources. I sometimes see examples of burn-out in the ranks but most of the time we just get on with it.

Fortunately Australians have a much-revered reputation of being able to fix anything with fencing wire and binder twine!



CSIRAC Computer now at Melbourne Museum. Commissioned in 1949 it remained in service until 1964. It used valve technology with over 2000 valves.



NASA Tracking Antenna DSS-46 at Tidbinbilla near Canberra. This dish brought down the first images of Neil Armstrong walking on the surface of the Moon (Apollo 11, 1969). The dish is now preserved but retired.

New Uses for Old Mills in Stroudwater

The Stroudwater Textile Trust seeks to tell the story of the Gloucestershire woollen industry at three different mill sites, at two of which there is working textile machinery. It also promotes research into the local woollen industry through exhibitions in partnership with Stroud Museum; it supports tourism through its open mills programme; it keeps a watchful eye on planning applications involving former woollen mills and actively promotes the imaginative and sensitive re-use of mills, having exhibited at the first Festomane event in 2012.

Jennifer Tann

During the early Industrial Revolution there were some 200 fulling/woollen mills along the three main river systems of the Frome, Cam, and Little Avon in Gloucestershire, all flowing towards the River Severn. While some were small mills containing only fulling stocks and, perhaps, a gig

mill, others were larger and contained most or all of the processes of woollen manufacture. These larger mills were often erected on the site of a much earlier and smaller fulling mill – water rights had already been agreed and leats/ponds constructed and stream-side land became scarce. Trade fluctuations, added to the fact that, with increased mechanisation and a fairly static market for broadcloth (and a seeming reluctance of manufacturers to diversify) the demand could be met by fewer mills, the number of manufacturers decreased rapidly from the early nineteenth century onwards. The financial panic of 1825 sealed the fate of many of the smaller clothiers – 16 firms went bankrupt in 1826. Ten years later there were an estimated 118 mills at work; the figure had fallen to 77 by 1841; 28 by 1870 and by 1900 there were only eight working woollen mills. Two world wars and orders for woollen cloth for forces' clothing saved these for half a century but decline continued. Now there

are only two mills making woollen cloth in Gloucestershire.

Some clothiers chose to leave the trade before they lost everything, others continued and there were still some fortunes to be made in the mid to late nineteenth century. Expansion of mill sites tended to take place in the Severn plain – land was flatter for building, besides which, proximity to the Severn, via the Stroudwater Canal, encouraged the adoption of steam power as at Stonehouse and Eastington, besides Stanley Mill, Ebley Mill and Lodgemore. It was these mills in the Severn plain which were rebuilt and extended through the nineteenth century, several of them being illustrated in a 1904 publication, *Industrial Gloucestershire*, which shows just how large some of these mill complexes were.

While mills in the tributary valleys of the River Frome tended to be smaller than in the Severn plain, there were exceptions. Three sites in the Nailsworth Valley: Longfords Mill (which



Ebley Mill 1818, now converted for Stroud District Council

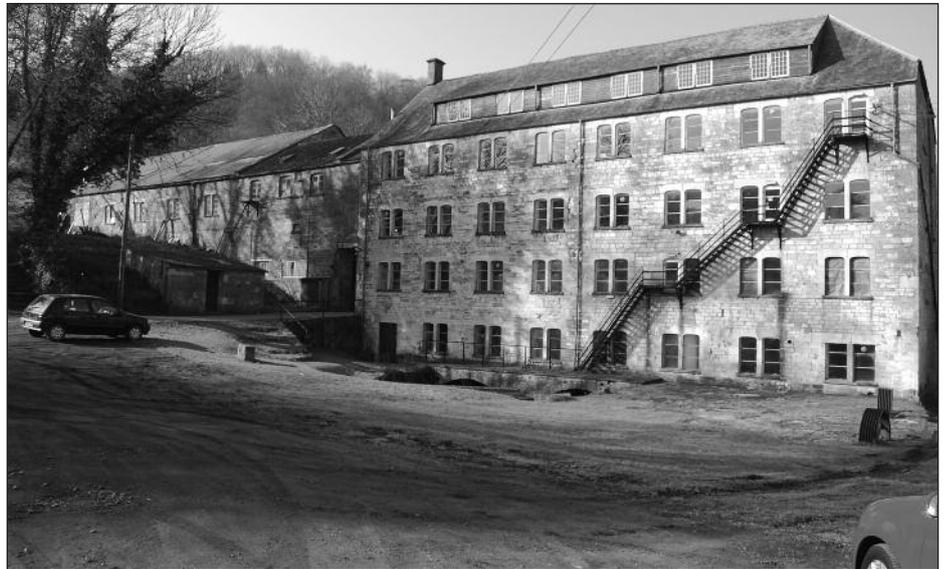
ceased cloth production in 1990), Dunkirk Mill (which ceased cloth production in 1889) and Lightpill Mill (which ceased in 1907) were large. Cam Mills, on the River Cam, was re-built in 1815 on an old site and, with Lodgemore Mill, Stroud, now manufactures sporting cloths (billiard/snooker table cloth and tennis ball covering).

The fate of these redundant cloth mills was, of course, varied. Those in the upper reaches of tributary valleys have tended to fall into disuse, a few have been converted to housing (as at Pitchcombe in Painswick Valley) while others have been demolished. Uley, on the upper reaches of the Ewelme, once home to eight mills, had reverted to being a quiet, pastoral valley by the mid nineteenth century. Painswick, too, provides evidence of its former woollen industry wealth in the fine clothiers' houses, rather than mill remains, although King's Mill is a handsome survivor, long-since converted to housing.

Business diversification had begun by the mid to late nineteenth century. Some mills were converted to flock manufacture, silk throwing, pin making and walking stick manufacture, while several new engineering businesses were created at the end of the nineteenth century. But over time these, too, ceased and the mills were often converted to housing. This was aided by the mills – even mid-nineteenth century buildings – being four or five storeys high at most, the individual buildings being on nothing like the scale of the larger Yorkshire woollen or Lancashire cotton mills. Dunkirk Mill, in which the Stroudwater Textile Trust has a small demonstration area secured under Section 106 planning, has been sensitively converted to apartments. Work has yet to commence on Stanley Mill, with its unique arched cast iron framing, but its fate has been sealed and it is only a matter of time before this, too, is converted into apartments. This is a cause for concern on account of the inevitable cross-section divisions that will be created between apartments.



Oil Mill, Ebley converted for Snow Business International who manufacture artificial snow in 160 varieties.



St Mary's Mill, Chalford, with Tangye engine and fulling stocks, occasionally open to the public.

There are, however, some imaginative new uses for old mills in Stroudwater. New Mills, Wotton under Edge, an elegant brick building dating from 1802, is the headquarters of Renishaw, a research and development intensive company in inspection and measuring equipment; this company has also conserved Inchbrook Mill in the Nailsworth valley as a social centre for its nearby modern works. Ebley Mill, a handsome building dating from 1818, has been sensitively converted, with the minimum of internal divisions, to become the offices for Stroud District Council. St Mary's Mill, built on an older fulling mill site in 1820, with its nearby handsome clothier's house, is home to an IT business, and Stroudwater Textile Trust, with the permission of the owner, opens the ground floor to show a waterwheel, Tangye compound engine and wall-mounted fulling stocks. A small three-storey former woollen mill (Oil Mill, Ebley) located just west of Stroud, has been converted to the manufacture of artificial snow, an

innovative development from domestic beginnings. An elegant mid nineteenth century corn mill, on the site of a former fulling mill in Chalford, is home to Heber which designs electronic control systems, while Hallidays Mill, Chalford, is now home to a range of craft businesses and a fitness centre.

Fourteen of the larger mill sites have been converted to industrial estates, usually involving the demolition of some of the older buildings and conservation of others. The record, here, is mixed but part of Lightpill Mill survives in Bath Road Industrial Estate, while Bond's Mill, Eastington is well conserved in an industrial estate.

Former woollen mills in the Frome Valley have fared much better than those along the Cam and Little Avon valleys; this is highlighted along the 'Golden Valley' section of the railway route from Paddington to Gloucester. Stroudwater Textile Trust continues to be vigilant and enthusiastically supports AIA's Adaptive Reuse Award.

Cellular Mobile Communications Heritage

It's just 30 years since the UK's first commercial cellular (mobile) telephone network was launched. However, in this short time the industry has evolved at an extraordinary pace from basic mobile telephony to advanced mobile computing. The development of telecommunications is not as well covered as it should be from an industrial heritage perspective and mobile communications even less so.

Andy Sutton

The first network to be launched was Vodafone on 1 January 1985 with Cellnet following shortly afterwards. Artefacts which survive from the early days are the actual mobile phones: youngsters are often shocked by the size and weight of these and more so by the fact that you couldn't send text messages on them! The topic here is not the mobile phone itself but rather the infrastructure which powers the cellular networks and in particular cellular radio base stations. The speed at which the mobile industry deployed radio base stations was remarkable; at one point there were over 52,000 operational radio cell sites in the UK. The number has been reduced slightly recently as mobile network operators are increasingly sharing infrastructure. In just 30 years the physical form of a cellular radio site has changed significantly. Quite often this goes unnoticed as the radio tower, column or rooftop installation is still there, yet the evolution from first generation analogue systems to 2G, 3G and now 4G digital systems has changed the radio antenna systems and site equipment considerably.

The actual structures on which the antenna systems are mounted vary considerably and for a variety of reasons; from planning permission to site provider requirements and from radio planning considerations to structural loading. Structures can be classed as masts, towers, columns, street-works (lampposts) and many other things, including some even disguised as trees.

Figure 1 illustrates the diverse range of towers in use for the provision of cellular radio signals; on the left is a pre-cellular microwave radio tower which formed part of BT's national telecommunications trunk transmission network before buried fibre optic cables were used. The tower in the centre is an early Orange radio site deployed in 1993. The dimensions of the top of this tower are quite specific as two antennae are separated by a certain distance and operated cooperatively to improve the received signal from the mobile phone, a technique known as space diversity. The tower on the right illustrates a new technique. Rather than space diversity, an alternative known as polarisation diversity is employed; this removes the need for the spatial separation of antennae and allows for narrower structures.

Figure 2 shows a range of non-lattice tower structures, albeit the stub tower on the water tower rooftop is a short lattice tower. A circular dish-like antenna can be seen just below the long



Figure 1: Cellular radio base station towers.

Photos Andy Sutton



Figure 2: Column, lamppost and rooftop (with stub tower) installations. Photos Andy Sutton



Figure 3: Non-standard cellular installations.

Photos Andy Sutton

cellular antennae on the column on the left; this is a 'point to point' digital microwave radio system which provides the connection between the cell site and the mobile operator's core network. Rooftop installations can take many different forms, from the stub tower seen on the right of figure 2 to simple poles and antennae often mounted on the side of a building, which minimises the impact on the skyline. There are many technical, commercial and planning reasons

why a given cell site looks the way it does.

There is a wide range of less obvious cellular installations in the UK; figure 3 highlights just three examples.

Fake tree structures have been deployed across the UK, often in areas of outstanding natural beauty. The folly in the middle photograph was badly vandalised and attracted anti-social behaviour before the cellular installation; as part of the agreement with the site provider the

mobile operator renovated the structure and fitted a secure door. On the right of figure 3 is a piece of community art with the cellular antennae integrated in the upper section.

We have already lost a significant amount of heritage as not a single first generation cellular site remains in existence in the UK and of great concern is the lack of photographic and documented evidence of this period, a period on which our future connected society is being built.

Limoges – Pottery and Transport

Limoges porcelain is universally famous. The French, however, are not necessarily so good at retaining the physical remains of their industrial heritage. It seems that in the vicinity of Limoges, only the remains of a few brick built pottery kilns survive and the Royal Limoges porcelain manufactory by the river Vienne, which dates from about 1797, is probably the most complete surviving example of a traditional pottery. Here, unlike the practice relatively commonplace in North Staffordshire, kilns were inside buildings and two buildings which contained kilns have been retained as a visitor attraction.

Robert Carr

Britain had developed a coal and iron economy by at least the early seventeenth century; this is one of the main reasons why the industrial revolution was to happen here, rather than elsewhere. On the Continent people continued to use wood for fuel until a surprisingly late date – often after the coming of the railways, which could be a good deal later than here. In Vienna great rafts of tree trunks were floated down the Danube to supply the city with fuel and this continued until as late as 1880.

In Limoges the first railway arrived in the mid 1850s and earlier in the nineteenth century the pottery kilns burned wood for fuel. As in the case of Vienna this was floated down the river; standard continental practice. As well as direct employment in the porcelain industry a considerable part of the population of Limoges became employed in lumbering to provide timber needed to fire the kilns. However rather than constructing rafts as on the Danube, the practice here was more informal – the logs, relatively small in size, were floated individually. In the river Vienne opposite the Royal Limoges pottery, a timber barrage, open so as not to restrict the flow of water, was constructed so as to partially span the river – rather more than half way. Slightly further up river a similar second barrage was constructed out from the opposite bank, again projecting rather more than half way. These two barrages could thus catch almost all the floating logs without seriously delaying river traffic.

After the barrages had caught the logs they could be collected together and stacked up on the bank. Here a small area served for sorting and stacking the timber to be used as fuel. Later the use of coal superseded this practice. The Royal

Limoges pottery is set back some distance from the Vienne and the intervening space was used for gardens – probably for the workforce to grow vegetables for themselves.

However despite this apparently benevolent paternalism, in general, conditions were poor in the pottery industry with outworking an unpopular feature. Civil unrest was a



Kiln at Royal Limoges

Photo: R Carr



The two kiln buildings at Royal Limoges pottery – museum inside.

Photo: R Carr

characteristic of Limoges with serious riots in 1830, 1848 and 1905, earning Limoges the title 'red city'. Porcelain workers were often in the vanguard of these disturbances. Described as 'France's first socialist city', Limoges was where the Confédération Générale du Travail (CGT) was formed in 1895.

At the Royal Limoges manufactory, the front of the establishment which faces southeast towards the river is now mostly a factory shop. The pottery works themselves are behind this range of buildings to the northwest. A long range of buildings on the northeast side is now a 'drive thru' McDonald's. A pair of small buildings which contained pottery kilns survive near the southwest corner of the works – see photograph. The two buildings to the left, with roof ventilation, contained kilns and these buildings now serve as a small museum. The second photograph shows a surviving kiln which dates from 1904, apparently not so different, especially the lower two thirds, from those in North Staffordshire – say at Longton where kilns were quite often built in the open air.

Classified a Historic Monument in 1987, this kiln is of reverse flame type, 7.75 metres in

diameter and 19.5 meters high. A total of 100,000 weighty refractory bricks were used in its construction and there are eight arched firemouths. Firing lasted 40 hours during which about 1,600 kg of coal was consumed. Inside the kiln, temperatures ranging from 950 to 1,400 degrees centigrade were produced. The porcelain pieces were protected by refractory saggars, almost identical to those used in North Staffordshire. Setting the saggars required considerable skill to achieve uniform firing.

In order to judge the temperature inside the kiln, special fusible ceramic samples were used which could be watched during the firing through small observation holes set in the wall of the kiln. In more recent times more precise measurement of temperature became possible and a section of the museum is devoted to the development of the pyrometer.

Apart from fine porcelain the museum displays a wide range of ceramic products illustrating the past output of factories in the Limoges area. Electrical insulators of various kinds became an important feature of the Limoges industry for more than a century. Here you will see domestic light switches, plugs,

sockets, junction boxes and so on. A publicity photograph showing insulators of giant size for high tension electricity distribution is on display.

A trolley bus service runs to a terminus quite close to the Royal Limoges pottery. Trolley buses were introduced in the town in 1943, the same year as in Zlin in the Czech Republic. It might at first seem an extravagance that at the height of the Second World War such vehicles were introduced in manufacturing towns in occupied Europe, but Germany was extremely short of oil. Electric vehicles could be powered from coal which was a fuel the Nazis had under their control. In order to maintain the war effort and the production of armaments and war materials from the occupied countries, replacing increasingly scarce oil-based fuels by electricity was clearly a priority.

In Limoges nowadays at least some trolley buses have small auxiliary internal combustion engines and can motor slowly when there is no overhead current. It is quite interesting to watch this happen when, for instance, a section of route has no electric power because the overhead cables are being maintained.

300 Years of 'The Miners Friend'

The year 2015 is the third centenary of the death of Thomas Savery. Although his best known invention, 'The Miner's Friend', can be dismissed as 'didn't work' - it would be fairer to say that 'it didn't work very well'. He was the first to try to use high pressure steam but the materials then available were not adequate.

Chris Barney

His idea did work well enough for Savery to be granted a patent in 1698 after demonstrating a model at Hampton Court. The title of the patent was: 'A grant to Thomas Savery of the sole exercise of a new invention by him invented, for raising of water, and occasioning motion to all sorts of mill works, by the important force of fire, which will be of great use for draining mines, serving towns with water, and for the working of all sorts of mills, when they have not the benefit of water nor constant winds; to hold for 14 years; with usual clauses.' This was all a little optimistic.

The device consisted of a pressure vessel connected to two pipes with valves. One pipe led to water in the sump and the other was the outlet which, in the case of a mine, led to the surface. Steam was introduced into the vessel, this was condensed and the inlet valve opened, drawing up water into the partial vacuum. The inlet valve was then shut and the outlet valve opened. Further steam then forced the water in the vessel up the outlet.

Several of the machines worked successfully in modest circumstances such as pumping water to the tops of buildings, but there were three important problems. It could only lift water 30 feet and so for mines it would have to be installed

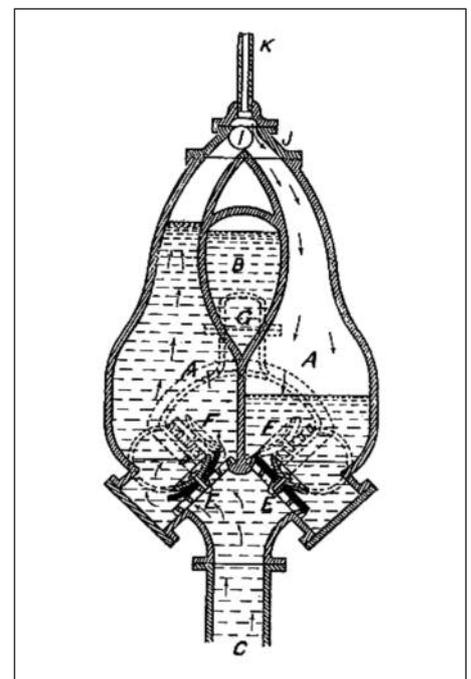
at the bottom and subject to possible flooding. It was very inefficient as much of the energy was wasted in heating the water being pumped. Most importantly, although in theory steam could force water up several hundred feet, this would require steam under high pressure and the technology was not then available to produce this safely. It took nearly another century before engineers like Trevithick were able to use high pressure steam with all its advantages.

In an early attempt to use a Savery engine in a mine in Wednesbury it was said that the steam 'rent the whole machine to pieces'.

Savery's original patent in 1698 was for 14 years but the following year he managed to get an Act of Parliament – The Fire Engine Act – extending it for a further 21 years and covering all engines that 'raised water by fire'.

Thomas Newcomen's atmospheric engine came under this term and it obliged Newcomen to go into partnership with Savery in 1712. After Savery died the patent was passed to a company *The Proprietors of the Invention for Raising Water by Fire* which issued licences for building and operating Newcomen engines for which they charged as much as £420 per year. The act expired in 1733, four years after Newcomen himself had died.

This is not the end of the story, for in 1872 an American, Charles Hall, patented a pistonless pump very much based on Savery's invention. In 1875 the rights were bought by a British engineer who founded the Pulsometer Engineering Company Ltd. The original 'fire engine' now had two chambers providing a more even output and was made of cast iron. As a pump with no pistons, rods, cylinders, cranks or flywheels it was very



Section of a Pulsometer pump using the ideas of Thomas Savery

reliable and ideal for work in quarries and with mud or contaminated water and even recommended for syrups and treacle.

In 1901 the firm moved from London to Reading. Pulsometer Engineering joined with Sigmund Pumps of Gateshead to become Sigmund Pulsometer Pumps in 1961 and in 1986 acquired Henry Sykes plc, subsequently moving all the production to Coleford. Now known as SPP, its main research and development, manufacturing and testing facilities are still in the UK although owned by the Kirloskar Brothers of India who employ some 5000 people worldwide.

Dukesfield Smelters and Carriers Project

In the seventeenth, eighteenth and early nineteenth centuries, carriers walked laden pack ponies over the Northumberland moors bringing metal ores from the Pennine mines. After smelting at Dukesfield (five miles SE of Hexham), they then followed the Lead Road, along the ridge through Leadgate and Coalburns, to the waiting ships on the River Tyne at Blaydon. Dukesfield closed in 1835 and production moved elsewhere. The mill was dismantled and the arches and chimneys were left to decay.

The Dukesfield Smelters and Carriers Project grew from local concern about the state of the Dukesfield Arches. Working together, the parishes of Slaley and Hexhamshire with the Friends of the North Pennines raised the funds to repair the arches and this has now been done. The Dukesfield Arches look magnificent again.

But the Dukesfield Smelters and Carriers project is about much more than the Arches. Dukesfield was a huge lead smelting mill for about 150 years, finally closing in the 1830s. Here was a buzzing hive of activity with lead ore pouring down from the North Pennines carried on the backs of pack ponies to be turned into lead by the skilled men who sweated at the lead hearths or furnaces. From here a further stream of ponies and carts carried the pieces of shiny lead down to the River Tyne at Blaydon. What was life like for all these workers and their families? Who were they, where did they live and what did they do? Local people have long been intrigued by the elegant arches at Dukesfield, speculating about their origins and evocative presence.

In 2011/12 the two local parish councils teamed up with the Friends of the North Pennines charity to develop a plan and seek funding. A development grant was awarded by the Heritage

Lottery Fund in 2012 and a full Heritage Grant in early 2013, alongside smaller grants from funders for research and to celebrate the history of this Grade 2 listed gothic structure, and the regional industry of which it was an important part.

Between 2013 and 2015 artists, archivists, archaeologists and architects all worked alongside volunteers, interpreters and educators to conserve and reveal the past of this now tranquil place, once the hub of the North East's thriving lead and silver industry.

Volunteers have transcribed thousands of letters and other documents to create a free, fully searchable, online collection of material. This collection now totals well over a million words.

Children from Allendale Primary School and Whitley Chapel and Slaley First Schools have enthusiastically joined in lots of activities related to Dukesfield and the local lead industry during the project, including a candle-lit storytelling session. The experience gained in running these activities has resulted in the production of published teaching material that can be used by teachers throughout the area to bring this important part of their pupils' heritage to life.

The enthusiasm of local people has been overwhelming, exceeding all targets and expectations for audiences and voluntary work on the project. By the end of 2014 the number of volunteer hours put into the project by about 190 local people had already exceeded the project target by 30%, and by the end it had risen to around 1600 days.

Dukesfield mill was the first to be established by William Blackett, already a successful Newcastle merchant by the time he turned to lead mining about 1660. The regional lead industry as a whole appears to have grown enormously in the last decades of the

seventeenth century, with Blackett – and his equally capable son Sir William II from 1680 – in the vanguard. By 1700 William II was mining throughout Allendale and in Weardale, and by then Dukesfield had probably been joined by his other two mills at Rookhope and Allenheads. An enduring pattern of ore carriage by packhorse from mines to the mills, and of pieces of lead by packhorse and two wheeled carts onwards to the navigable reaches of the Tyne at Blaydon was in place by the 1670s. So too were the key elements of a management structure needed to co-ordinate logistics and operations over 40 miles of difficult country and to sell the end product: a chief agent or steward, normally based in Newcastle, and subagents in charge of the mines and the mills.

The industry went into depression about 1710, and the less capable Sir William III, son of William II was heavily in debt at the time of his death in 1728. However, careful and steady stewardship under the long proprietorship of Sir Walter Blackett and his managers Joseph and Henry Richmond, eventually restored the business to a position of strength by the 1760s, despite market upturns and downturns. Under Sir Thomas Blackett from 1777 and his chief steward, John Erasmus Blackett, the business grew steadily, production from Dukesfield rising from around 1,000 tons of lead per year until the 1760s, to over 3,000 by the late 1780s. In 1765 a silver refinery was added at Dukesfield in addition to the long standing one at Blaydon and it is possible that the iconic arches date from about the same time. When Thomas Blackett's daughter, Diana Beaumont, and her husband Colonel Thomas Beaumont, inherited the business in 1792, an average summer's day would have seen hundreds of horses bringing in ore and fuel and carrying away the lead.

Under the Beaumonts, during the Napoleonic Wars, Dukesfield reached the peak of its activity. Allen Mill below Catton was taken on in 1795 to add more smelting and silver refining capacity, and full advantage was taken of turnpike roadbuilding to improve transport links. The opening of roads in Allendale in the 1820s left Dukesfield relatively isolated and when further smelting capacity became available at Blagill Mill, Langley in 1835 – and the railway opened between Hexham and Blaydon – the mill was closed.

After a year and a half of planning and two and a half years of constant HLF-funded activity the project finally ended in June. All who have taken part have rated it a huge success and our admirers have included the regional office of the HLF who invited us to submit the project for the 2015 National Awards.

At the closing ceremony on 7 June 2015 Lord Allendale unveiled the Lead Way Milestone and met his (fictional) ancestors to receive a bound copy of the archaeological account of the arches, as a token of thanks for leasing the site of the Arches to the project and for his support and interest throughout.



Lord Allendale and his 'ancestors' at the closing ceremony

The London Bus

The highly esteemed Miss Polly Perkins of Paddington Green, famed for her good looks, married a dashing fellow with a military bearing. From his gait he had probably been a cavalryman. In the mid 1860s, ten years after the Crimea, such men were favoured by the London horse omnibus companies, and were employed as conductors. A military man who knew how to wear a uniform and look smart was thought to be reassuring and would encourage timid passengers. Such a man as Miss Perkins' husband had the additional advantage of being familiar with horses.

It is noteworthy that this social phenomenon should have been made the subject of a popular music hall song in 1864, but in London interest in buses seems perennial. Quite apart from bicycles, the present mayor, Mr Boris Johnson, is often in the news concerning buses – see below.

There seems to have been a considerable interest in the provision of bus services in the early Edwardian period. In *The Engineer* of 21 March 1902, the nickname for a steam omnibus which ran between Oxford Circus and Hammersmith is discussed on page 287, with no very definite conclusion being reached. There is also a note on page 291 of the same issue about the possible dangers of the acetylene lighting of omnibuses. As with many new things there is often concern that a new technology might introduce health problems. More than a little space is given up to this and the eminent periodical *The Lancet* is criticised for raising fears, indeed almost scaremongering, that 'phossy-jaw', as suffered by the match girls of Bow, might be the outcome.

After the legendary RT, one of the most celebrated London buses is the Routemaster and to celebrate sixty years of their existence a massive rally was held in Finsbury Park on the 12



Routemasters in Finsbury Park

Photo: R Carr

and 13 of July 2014. A surprising number of these vehicles are still maintained in running condition, generally by private owners, and well over a hundred of them were on display for the weekend. What a variety there were! It is claimed that a grand total of 136 turned up. A few of them also ran passenger-carrying trips around the area – a special free X60 service was in operation with bus conductors giving out paper tickets from period machines. Readers will be familiar with the ardour of locomotive enthusiasts but it seems that some cases of enthusiasm for buses can be even more extreme.

A press interest in the London motor bus continues to this day and the Mayor of London, Mr Boris Johnson often promotes himself to the

public in connection with the new London Routemaster which went into service early in 2012. A recent book, Boris's Bus by James Whiting, even depicts Mr Johnson on the cover standing on the rear platform of one of the new Routemasters. On 27 January 2014 the Mayor of London launched the Year of the Bus, to celebrate 'an iconic symbol of London's transport network'. Last year it was a hundred years since the B-type bus went to the Western Front, 75 years since the introduction of the RT bus and 60 years since the Routemaster first appeared. London buses carry 6.5 million people each day. The underground carries four million passengers a day.

Robert Carr

A Priceless but Vulnerable Asset: valuing and sustaining Britain's industrial heritage.

To mark the 2015 European Industrial & Technical Heritage Year (EITHY) the AIA is collaborating with the Heritage Lottery Fund, The Prince's Regeneration Trust and Historic England in organising two events – a Seminar in Brighton on 4 September, before the AIA Conference, and a symposium on Re-use of Historic Industrial Sites at the end of the year. The AIA is also launching its Award for the Best Adaptive Re-use of an Industrial Building to celebrate 2015 EITHY and hopes to announce the short-listed entries at the Seminar and the winner at the Symposium itself.

At the Brighton seminar the morning session *Putting a Value on Industrial Heritage* will be chaired by Marilyn Palmer with speakers from the Heritage Lottery Fund, Historic Scotland, Historic England Cadw and the Association for Independent Museums.

The afternoon session *Funding and Sustaining Industrial Heritage*, chaired by Keith Falconer, will have speakers from the Architectural Heritage Fund, the Princes Regeneration Trust and also cover subjects including The Role of Volunteers, ERIH? Routes in UK and the European Dimension.

The seminar will conclude with Sir Neil Cossons speaking on – 'Sustainability - the Way Ahead'

Arkwright Society Conference at Cromford Mill, Derbyshire Saturday 26 September 2015

Industrialisation and Society in Britain in the Era of the Industrial Revolution

Leading British experts on the Industrial Revolution will set out their views on the time when Britain changed in every way, led by a new spirit of entrepreneurship and innovation:

Professor Stanley Chapman, (Nottingham University) will talk about the builders who helped Arkwright deliver the totally new type of industrial building needed for his machinery; Dr John Stevenson (Oxford University) will discuss the role played by the radical political thinker of the Industrial Revolution, William Cobbett, and Professor Carolyn Steedman (Warwick University) will set out what it was like 'Living the Industrial Revolution'.

The conference will take place in the Cromford Mills complex. There is also the opportunity view the site where Richard Arkwright's water powered spinning machinery was perfected and brought into operation in 1771; to view also the major renovation project the Mills have been undertaking in the last few years, and which is now nearing completion.

Full details google Cromford Mills Website or ring 01629 823256

A London Miscellany

The River Thames flows from west to east through the centre of London. Similarly, in this report topics are arranged roughly from west to east.

Robert Carr

Peripatetic fairs and circuses set up on green spaces in London are still commonplace. Some of them use interesting old vehicles; Zippo's circus is currently using lorries made in Sandbach by Foden and ERF. It is said that they are all more than 18 years old. Some Zippo lorries run on fuel which includes recycled chip fat.

In London in the last few years, quite a number of post 1950 buildings have been listed. The architect Colonel Seifert infamously rebuilt Euston station during the 60s. Now some of his own buildings are being considered for listing. Centre Point is already so and other suggestions include the NLA Tower, Croydon. NLA stands for Noble Lowndes Annuities.

In the basement of the Houses of Parliament they had a steam engine – a horizontal duplex air compressor engine made by Marshall & Co Ltd of Gainsborough. It was on standby for many years and is probably still there. President Carnot of France (1837 – 1894) was originally an engineer. Could an engineer ever become a British prime minister?

The fifty years old Elizabeth House in York Road SE1 is looking pretty good at present – has it been cleaned? The Portland stone looks excellent, as does the cladding on the nearby Shell Centre. What a really first class material this is, and there are acres of it in London on buildings of this period. It is a wonder that any of the Island of Portland is left, and they are still extracting it now – from deeper levels.

Elizabeth House is not far from County Hall and the LCC architects no doubt kept an eye on its design, located where it is close to the Royal Festival Hall and Waterloo railway station. This

would have been a prestigious site and probably considered fairly sensitive. It was a John Poulson building but the head of the firm was more involved in brokering deals. The actual design was done by one of his architects in the office, a situation not dissimilar to that at Richard Seifert and Partners. For instance Frank Booth, Poulson's senior architect, was said to be brilliant. The quality of the architecture would depend on who was assigned the job. See the *Construction History Society Magazine 89, April 2011, pages 7-9.*

Close by to the east of Elizabeth House, near Waterloo railway station, is another surviving Poulson building, Elizabeth Tower – also known as the Tower Building. This block is still in use for office accommodation, as is Elizabeth House.

Blackfriars railway station now extends southwards over the Thames and since 2011 has had an exit on the South Bank, close to the Founders Arms. This makes getting to the Kirkaldy Testing Museum so much easier for people who can access Thameslink trains – KTM is now just a short walk.

Universities are moving into the area surrounding the 2012 Olympic Games site. Loughborough University has a campus at Hackney Wick – it is proclaimed on signs at Hackney Wick Overground station. The precise location of the new campus seems somewhat unclear – it may not be fully open for business yet.

A few years ago, Hackney Wick was an artistic epicentre. Now many of the cutting edge people have moved on, elsewhere. After all, 'the future is east'. If you visit the area today signs of artistic activity can still be seen. The Lord Napier public house, Hepscoot Road E9, which closed in 1995, has been covered in graffiti.

Built in 1966-8, the Carpenters' Estate in Stratford, contains three 22 storey tower blocks; Dennison Point, Lund Point and James Riley Point. During the 2012 Olympics the upper floors and the roofs of Lund Point and Dennison Point were



MV Royal Iris at Charlton

Photo: R Carr

used by the BBC and Al-Jazeera for television coverage.

Looking south from the Olympic site, the Carpenters' Estate tower blocks, audacious modernist slabs, are still impressive and if in former times were thought to be overscale, they now complement nicely the recently built towers surrounding them. Demolition was to have been their fate but there is talk of reuse by University College London, and according to Owen Hatherley writing in the *Guardian* on Tuesday 22 April 2014, the 'towers' have been saved from demolition by a local campaign. Lund Point and James Riley Point may perhaps be reused but Dennison Point, quite close to Stratford railway station, occupies a more prestigious position and seems more likely to be replaced by a new commercial office block.

The MV Royal Iris at Charlton (IA News 118 page 12) is now 65 years old and in a deplorable state. Schemes to move her back to the Mersey have never seemed very likely to succeed – the cost would be prohibitive; a six figure sum has been quoted. In March 2010, Mr James Jegede the current owner of the Royal Iris spoke to BBC Radio Merseyside about his plans for her. Things have since then become relatively quiet. If nothing is done to remedy her ruinous state she may eventually have to be scrapped on site which itself will be a very costly operation.

At Gillingham where the paddle steamer *Medway Queen* awaits completion, there seems to have been less activity after the building of the hull and the epic non-stop tow from Avonmouth in November 2013. However, recent news is that the vessel was towed to Ramsgate for the commemoration of the Dunkirk evacuation 75 years ago. She was in Ramsgate from about 18 to 26 May and is now really beginning to look like a vessel capable of putting to sea. A boiler still has to be installed.



PS Medway Queen at Ramsgate

Photo: R Carr

Progress on AIA Restoration Projects

The Cotswold canal trust has finished the work on the chamber of Bowbridge lock and it now awaits re-fitting of the gates. The work was more problematic than originally thought as much consolidation work of the ground above the lock was required to stop it collapsing into the lock.

There are three current projects related to railway rolling stock; the restoration of a Thompson coach on the North Yorkshire Moors Railway, the restoration of one of the original Ryde Pier trams on the Isle of Wight steam railway, and the restoration of a covered salt wagon at the Lion Salt works, all of which are progressing after somewhat delayed starts.

In Dundee the re-erection of the Boulton & Watt engine in the Verdant Works is progressing well with most of the structure of the engine now in place after years in store.

The Kennet and Avon Canal Trust have nearly completed the work on the boiler feed reservoir at Crofton.

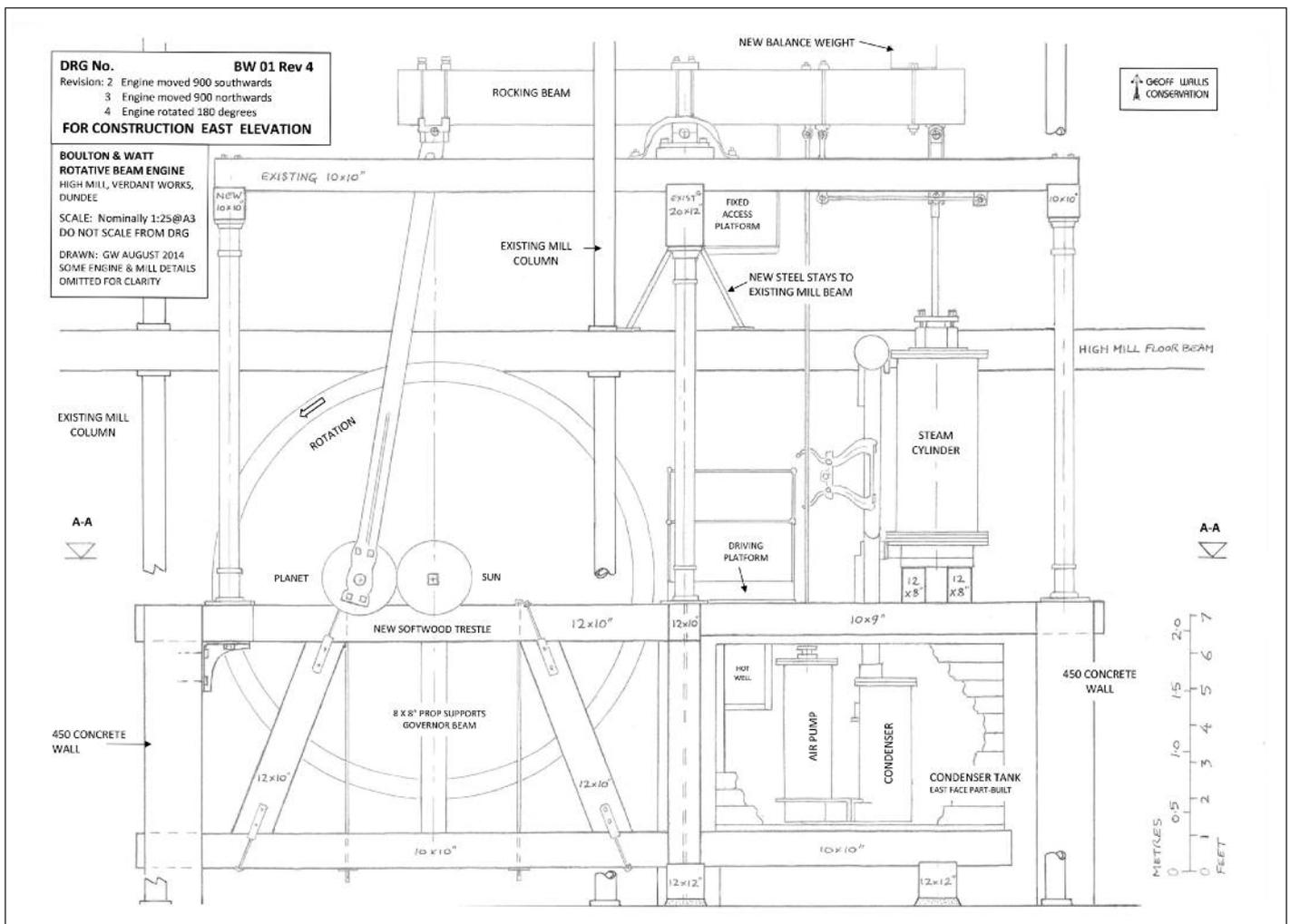
The project in what must be one of the most idyllic settings of any project that we have funded to date is now completed with the refurbishment and re-erection of the Stevenson designed Scallasaig light on the island of Colonsay (see cover).

Work on the canal warehouses at Wappenshall has yet to start, as structural survey work is still being conducted.

At Crich the tramway museum society has now started work on the consolidation and interpretation on the remains of a lead smelter that lies within the museums grounds.



Work in progress on Bowbridge Lock by the Cotswold Canal Trust. The structure of the lock chamber is now completed with the help of funding from the AIA restoration grants scheme.



The elevation of the Boulton and Watt engine which is in the process of being re-erected in Verdant Works, Dundee after years in store with assistance from AIA restoration funding

The Importance of Local Listing

If something is not on a local list it is very difficult for English Heritage to list it.

There was a most disturbing example of this in Peterborough. A redevelopment scheme was proposed for the area immediately to the east of the main railway station and the GN railway hotel of 1852, which one might suppose to be say grade II or even II*, was almost demolished in about 2005 because not only was it unlisted nationally but it was not on Peterborough's local list. Their very short local list available at the time was hopelessly out of date and even included buildings demolished when the Queensgate shopping centre was built in the 1980s. Thankfully Peterborough's truly splendid GN railway hotel designed by Henry Goddard is still standing and continues to function as an excellent hotel.

Robert Carr

Borrowing Brilliance – a question (or questions!)

As some AIA members may know, I am interested in the transfer of engineering ideas across sectors. Recognising that most 'new' technologies develop from something else, I have been looking for (and totally failing to find) a precursor to the wool textile rotary shearing machine, known as a cross cutter, invented by a Gloucestershire man, John Lewis. This year is the bicentenary of its invention. We know what invention the cross-cutter led to – the lawn mower. But what technology triggered Lewis's ideas to develop a rotative blade which moved across the nap of the cloth, thereby replacing the expensive shearmen? I would be most grateful for (and will acknowledge) any/all ideas sent to: innovation.jt@btinternet.com

Jennifer Tann

What was I looking at?

Can anyone suggest what these ruined buildings (presumably industrial) seen on the recent Rhone tour might have been? Attached is a photograph taken from the coach while passing, about 5 minutes before reaching the salt works at Arc-et-Senans, La Saline Royale. Presumably it is a mill of some sort but does anyone know anything definite about this site? Even its exact location might be a help! It may be just east of Arc-et-Senans, but I'm not sure.

Colin Bowden

King's Point, Reading

A good example of its period, this semi-industrial building was built by the River Kennet in Reading next to Watlington Street Bridge. Completed in 1966, it received a Civic Trust Award in 1969. Having been in a ruinous state for a number of years, demolition was expected. Plans were approved to convert it into an Etap hotel but they do not seem to have come to fruition.

A campaign to save King's Point was launched toward the end of 2014 but public opinion is divided and a majority are in favour of the building's removal. It is described as an eyesore and the question arises as to the reason for this. Obviously fashion plays a major part in the formation of this opinion but condition also seems to be an issue. If a building is in a disgusting state, is the eyesore as much its ruinous condition as the taste and aspirations of the original architect?

We saw this with Victorian buildings about fifty years ago. Dirty and shabby, often soot encrusted, the call to 'demolish that Victorian monstrosity' and replace it with a clean modern building, such as King's Point, was overwhelming.

However, cleaned and well restored, most Victorian buildings are now lauded as heritage treasures that no one in their right mind would ever have considered destroying. There are few more startling examples of this than St Pancras station in London.

Perhaps basically it all boils down to a question of money – is it really the circumstance of wealth that we like being clean, tidy and comfortable in fairly luxurious surroundings rather than seeing through a run-down condition to the real worth of things beneath? Part of King's Point has recently been used as a car park, car wash, tyre centre and taxi office. Had it all been a Hilton Hotel no doubt public attitudes to this building would be rather different. After all when new it did receive a Civic Trust Award.

Robert Carr



Great Northern Hotel at Peterborough

Photo R Carr



What was this? Seen from the coach on the way to the Rhone

Photo Colin Bowden



Kings Point, Reading. Demolish or refurbish?

Photo R Carr

New restoration grants for 2015

Thanks to the continuing support of our anonymous donor the Association has been able to make a further series of grants.

Twenty eight applications were received for the 2015 round of Restoration Grants, requesting total grants of £427,208 towards projects with a total value of over £ 7.1 million. It is good to see that the number of applications has risen significantly compared with previous years. Inevitably, some form of ranking to evaluate these applications was required. Several were rejected without further consideration as they either did not meet our terms or, in some cases, had nothing to do with industrial archaeology.

Three criteria were then used to assess which applications to support. First, the proposed grant should form a substantial proportion of the total cost of the project. Second, the item or project should have a notable 'rarity factor'. Third was the quality of the application, this needs to include clear identification of the objectives of the restoration project, provide details of costs and volunteer input, and the quality of the conservation policy. There also needs to be confidence in the management of the project and that it will be carried through as proposed.

The six awards that we have now made for 2015 total £58,397. They are, to the **South Tynedale Railway** for the renovation of a narrow gauge tamping machine, originally built for use underground on colliery railways; to the **Thorpe Light Railway** in Co Durham for restoration of a locomotive; to the **Prickwillow Museum** in Cambridgeshire for the renovation of a Vickers Petter 2 cylinder pumping engine; to the **Coker Rope and Sail Trust** for renovating the machinery in the Coker rope works; to the **Stover Canal Trust** in Devon for work on the canal graving dock and, finally, to the **London Wildlife Trust** for work on a waterworks chlorine gas house in Hackney.

The new AIA website

At the AIA council meeting in June members were able to look at the gamma draft of the new AIA website. It should not be long before it takes over from the existing one which has been in successful operation for many years but has become increasingly overtaken by new developments.

AIA Practical days

The AIA will be holding two practical days over the next 12 months at Ironbridge. The first will be in mid-October. 'Recognising the Archaeology of the Iron Industry' will look at the archaeology of the iron industry with talks in the morning on key structures and processes and a chance to visit the iron furnaces along the Gorge in the afternoon. The second will be provisionally on the last weekend of April 2016. 'Speaking up for Industrial Heritage' will look and will be a training seminar on heritage advocacy and how to save your local industrial site'. Watch out for more details on the AIA website.

2015 AIA Awards

Archaeological Report Award

This year the AIA have awarded the Archaeological Report Award to Penny Middleton from Northern Archaeological Associates for her excellent Archaeological Survey and Management Plan of West Stonesdale Lead Mine, Swaledale, North Yorkshire. The judges were also very impressed with a report produced by Matthew Town, also of Northern Archaeological Associates, on an archaeological survey of Nenthead Mines, Alston, Cumbria for which they have decided to award him with a highly commended certificate. Please note that next year's award will be for reports arising from unfunded/voluntary projects, please see the AIA website for more details should you wish to make a nomination.

Shane Kelleher

Peter Neaverson Award for Digital Initiative and Innovation

The judges of the Peter Neaverson Award for Digital Initiative and Innovation have decided to give the award to Matthew Town of Northern Archaeological Associates for his excellent use of digital technologies, in this case in the form of LiDAR, for his survey of the Grassington Mines, Grassington Moor in the Yorkshire Dales National Park. The judges were also impressed by an animation of Pont Ceunot: A Victorian Power Station for a Welsh Metal Mine, which was produced by Take 27 Ltd and the RCAHMW, and they have decided to award them a highly commended certificate.

Shane Kelleher

Peter Neaverson Award for Outstanding Scholarship

The 2015 Peter Neaverson Award for Outstanding Scholarship in Industrial Archaeology has been awarded to Lynn Pearson for her book *Built to Brew*. This book is the culmination of many years of research, which commenced in 2003 at the conference *From Grain to Glass*, sponsored by English Heritage, AIA and the Brewery History Society. The judges felt this book provided a definitive account of the history, architecture and industrial archaeology of the brewing industry in Britain and therefore merited this prestigious award. Despite its scholarly background, this book is very easy to read; it has copious illustrations and is highly recommended to anyone with even a passing interest in beer and brewing. It is published by English Heritage at £25, considerably cheaper than many recent publications from this source. A full review of *Built to Brew* appeared in issue 36.2 of *Industrial Archaeology Review*. It is hoped that Lynn Pearson will be attending AIA's annual conference in Brighton in September to receive her award and talk about her book.

Any member of AIA or its Affiliated Societies is encouraged to make nominations for this award and any work which has been published in English in the previous two years is eligible. Further details can be found on the AIA web site.

Ian West

AIA Spring Tour, Romania, May 2016

At present in Romania there is no framework for the protection of industrial sites and no general recognition of them as having any tourist potential. This makes finding information about them and gaining access for a tour group much more difficult.

As usual we are trying to put together an itinerary with a wide spread of interest to cater for all tastes. Amongst the sites we would very much like to include are:

- A day in Bucharest
- The gold mining site of Rosia Montana
- Sibiu and the area round including the Astra open air museum
- An early HEP installation, now a museum
- A look at the Govadjia iron working site
- The Steam loco museum at Resita
- The Petrol museum at Ploiesti
- The oil mine at Sarata Moneoru where we may be able to have a visit and lecture
- A visit to the Dacia works has also been suggested

Distances are large and it seems likely that we will have to stay in a different town every night except perhaps at Sibiu where we may be for two nights.

Adaptive reuse award

There has been a respectable though not overwhelming set of applications for this new award. For its first year the organising committee has good reason to be pleased and they plan to announce the short list at the Brighton pre-conference seminar (Valuing and sustaining Britain's Industrial Heritage) on 4 September.

The organising committee will be contacting all Affiliated Societies to seek their help in widening the pool of applicants in future years.

The AIA council see this award (BARIB) as a most important new initiative for the AIA and is anxious to see it grow. Professor Tann's article (page 9) on the reuse of Gloucestershire mills shows what can be done with examples of conversion of redundant woollen mills into housing, offices and industrial reuse.

A warm welcome to new members

Jim Brightman of Richmond, Yorkshire
Priscilla Seminario of Edinburgh
Peter Clegg of Littleborough, Lancashire
Peter Connelly of York
Mr and Mrs Hobbs of Cowley
Andrew Smith of Sandy, Bedfordshire
The Amlwch Industrial Heritage Trust (Parys Mountain, Anglesey) has joined as an Affiliated Society

AIA 2016 Conference

The AIA is planning to organise the 2016 Conference in Telford.

Questionnaire on the Annual Conference

A questionnaire was circulated with the Summer 2015 copy of IA news requesting members to send in their views and comments on the format and content of the annual AIA conference.

Out of 40 responses 75% had attended at least one conference and 62% a seminar. Of those who had not attended, or had stopped attending, the reasons were fairly evenly split between expense, timing and travel problems

An overwhelming 88% of all respondents reported that they were happy with the current conference format.

Topic	% in favour	% against	Comments
More short lectures? Perhaps with the membership taking a greater role?	71	29	Most respondents who commented related this to member's contributions which were felt to be squeezed into odd gaps in the programme rather than having their own proper place. There was also some support for more short lectures, possibly in the format used in Dundee.
Fewer lectures but more depth of subject?	29	71	Generally happy with current mix.
A conference starting on the Friday that covered only the weekend with no visits in the following week?	19	81	Generally happy with current format.
Currently we hold conferences based on a geographic area – would you like more thematic conferences?	20	80	The general view was against thematic conferences except where geographical location and theme were complimentary.
Would you like to see the proceedings published? (there would be cost implications in this)	53	47	Of those saying yes most felt that it should be an on line document – not hard copy.
Any further comments or suggestions about future conferences (or any other aspect of AIA affairs) would be welcome – please send them to Mark Sissons at the AIA Liaison Office, The Ironbridge Institute, Ironbridge Gorge Museum, Coalbrookdale, Telford TF87DX or email aia.liasonoffice@virginmedia.com			

NEWS

Schöneberg for holidays

A recent correspondence in the GLIAS newsletter has demonstrated quite an interest in paternoster lifts, now frowned upon in Britain as unsafe. It is reported that in Berlin in a district known as Schöneberg there are quite a number on which you can still ride. *[Brave souls rode on one in Zlin during the AIA Spring Tour to Moravia 2014 Ed]*

This part of Berlin not only has paternoster lifts, there is also a huge preserved gasholder. This is of the water sealed British type and for a fee you can even hire a guide and climb to the top of the guide frame – it is 256 feet high. The telescopic bell has been removed and a replica of the Dome of the German Reichstag built at the bottom. This is inside the steel tank – which is above ground. An official opening was performed by Mrs Angela Merkel in August 2009 and Günther Jauch now broadcasts from inside the dome. Other events and exhibitions also take place. The gasworks here used to be known as the English gas works in Schöneberg – Berlin.

Has anyone visited the Schöneberg gasholder? Is the Reichstag Dome an inflatable structure? From photographs on the internet it looks as if it varies in size; differing amounts

protrude above the tank. But was this just while the dome was being installed?

Robert Carr

Who do we want to be in step with?

Syria, Iraq, Libya, United Kingdom. Which of these countries has not ratified a key convention protecting cultural heritage?

The answer to the question is, unfortunately, the United Kingdom. The Hague Convention on the protection of cultural property in the event of armed conflict has been in existence since 1954, yet the UK government has yet to ratify it.

The Hague Convention is the primary piece of International Humanitarian Law concerning the protection of cultural heritage during conflict. However, despite numerous examples of the abuse and destruction of international cultural heritage recently, the UK government remains the only full-time member of the UN Security Council yet to ratify the Convention.

But there is good news. The Culture Secretary, John Whittingdale, announced in a statement on 21 June that the UK Government will bring

forward legislation "at the first opportunity". However, there is still no clear timeframe for this procedure.

Return to steam at Twyford Waterworks

Still commercially pumping 5 million gallons of water a day, Twyford Waterworks, in the South Downs National Park, demonstrates the complete history of water pumping through the ages. From Edwardian steam, through to 1930s diesel, 1950s electricity and right up to today's modern technology, the historic site has been described by English Heritage as 'exceptional'. Containing nearly all its original equipment from the past 100 years including five large lime kilns, a water-powered narrow gauge incline railway, water-driven lime mixing equipment and the entire water softening process, most of the Waterworks is now managed by Twyford Waterworks Trust and is run and kept alive by a team of 40 volunteers and nearly 200 Friends.

A grant of £820,000 from the HLF will now mean that the historic steam boilers and pumping engine will be restored and brought back into

steam. There will be new interpretation for visitors, and a new workshop facility.

Babcock and Wilcox supplied the three WIF boilers in 1906. With inclined water tubes suspended below the steam drum and enclosed in brickwork, they were a standard type through the first half of the twentieth century. Now only four remain in the UK, three at Twyford.

Graham Feldwick, Twyford Waterworks Trust Chairman, said:

"This is fantastic news for our Trust, and the HLF award will enable us to literally breathe new life into the Waterworks. Visitors will be able to enjoy the sights and sounds of the waterworks as it was in Edwardian times. Through our new 'Discovery Zone', which will have one of the boilers as a huge cutaway exhibit, and interpretation across the site, visitors will be able to gain a clear understanding of how drinking water has been produced from those early days through to the present day. This is good news too for our volunteers who will now have a new workshop and other facilities."

It is planned to complete the work this year.

Ed's note – An excellent exposition of the evolution of the Babcock and Wilcox WIF (Wrought Iron Front) boiler may be found by googling – Evolution of the Babcock and Wilcox boiler Guttenberg

New evidence of the Haytor Granite Tramroad

Archaeological excavations on the Stover Canal at Ventiford Basin in Devon have uncovered a 70 metre stretch of what is believed to be a siding of the Haytor Granite Tramroad, Devon's first railway.

The 12km tramroad was constructed in 1819-20 by George Templer of Stover, to move granite

from the quarries at Haytor, on Dartmoor, down to the coast for shipment to London and elsewhere. At Ventiford, the tramroad linked up to the west side of the Stover Canal – built by Templer's father, James between 1790 and 1792 – and from there the stone was transhipped on to barges and carried to Teignmouth via the Teign estuary.

A short section of the newly-recorded tramroad siding was first exposed last December by contractors working on Devon County Council's new cycle trail between Newton Abbot and Bovey Tracey. Further excavations have now been carried out by Stover Canal Trust, which have revealed an intact 30 metre section. A further 40 metres of track has been confirmed by test trenching using a mechanical excavator and by ground-penetrating radar (GPR), funded by Devon County Council.

Dr Phil Newman, Archaeologist, Stover Canal Trust, said: "Although long and impressive sections of the tramroad survive in situ within Dartmoor National Park, at Haytor Downs and at Yarner Nature Reserve, until now it was believed that the track had been lost along the 4.5km between Bovey Tracey and Ventiford, following the construction of the Moretonhampstead branch railway line in the early 1860s. This had followed the course of the disused tramroad, completely effacing it. However, this amazing find at Ventiford now provides the only surviving section of the tramroad outside the national park."

The tramroad is internationally renowned and is a unique monument to industry, because the track was built from elongated granite blocks placed end to end, with flanges along the rails to guide the wheels of the trucks, rather than using the more traditional iron rails with flanged wheels on the vehicles.

The archaeological work at Ventiford canal basin is being undertaken by the Stover Canal Trust (SCT) as a community project, with local volunteers working under the direction of Dr Phil Newman. It is funded by the Council for British

Archaeology's Mick Aston Archaeology Fund and the AIA Restoration Fund has recently agreed a contribution of £10,550 towards restoration of the graving dock. Other aspects of the project this year have included partly uncovering the remains of a wooden barge, which was hulked in the canal basin in the 1870s, as well as part excavation of two ruined buildings and an area of the quayside.

Assets of Community Value

The latest changes to permitted development rights came into force recently. One of the changes now states that Assets of Community Value (England only) require planning permission to be demolished or changed to any other use. Might this apply to industrial sites?

This new right means communities can ask the council to list certain assets as being of value to the community. If an asset is listed and then comes up for sale, the new right will give communities that want it 6 months to put together a bid to buy it. This gives communities an increased chance to save much loved shops, pubs or other local facilities.

Parish councils or local community groups can nominate both privately and publicly owned assets which meet the definition of community value.

A building or land must be listed as an asset of community value if:

- 1 Current primary use of the building/land or use of the building/land in the recent past furthers the social well-being or social interests (cultural, recreational, or sporting) of the local community;
- 2 It is realistic to think that now or in the next five years there could continue to be primary use of the building/land which will further the social well-being or social interests of the local community (whether or not in the same way as before).

What sort of things can be listed as an Asset of Community Value?

Certain types of property are excluded from being listed, such as purely residential property, land licensed for use as a residential caravan site and the operational property of statutory undertakers (such as key road, canal and rail networks). Although the act notes that 'social interests' includes 'cultural, recreational and sporting interests' the phrase 'social well-being' can apply to a much broader set of activities.

Demolished pub must be rebuilt

In April the owners of a historic London pub who triggered outrage by demolishing it without permission have been ordered to rebuild it brick by brick.

Council chiefs issued an unprecedented enforcement notice to the firm that owns the Carlton Tavern in Maida Vale requiring it to "recreate in facsimile the building as it stood immediately prior to its demolition".

The owners, Tel Aviv-based developers CLTX Ltd, ordered bulldozers in to reduce the early 1920s building to rubble after staff were told to stay at home for an inventory.



Newly uncovered section of the Stover tramway

Robert Davis, deputy leader of Westminster Council, said he was 'absolutely horrified at the 'scandalous' destruction.

The enforcement notice will stop the owners from selling the site until the building has been restored. It is thought this is the first instance of a local council ordering a building be reconstructed from the ground up. The council has arranged for the pub to be listed as a non-designated heritage asset, a status which should prevent it being pulled down in future.

In January, Westminster threw out a planning application to replace the redbrick pub with flats. Shortly afterwards the government announced plans to strengthen protection for England's pubs to prevent them being demolished so readily. Historic England was also considering a recommendation of listing it at Grade II, saying it was 'remarkably well-preserved externally and internally'.

A report to the council's planning committee from its director of planning, John Walker, said: "An asset which was a listable heritage asset has been demolished in breach of planning control. In these circumstances it is not considered that other lesser steps are possible to address the harm other than to require complete rebuilding."

Paisley Fountain back in all its glory

The Grand Fountain in Paisley was the overall winner in the category for Restoration or Conservation in the Museums and Heritage Awards 2015.

The intricate cast-iron A-listed structure – one of the town's architectural treasures – was painstakingly returned to its original Victorian-era condition last year.

Judges praised the Renfrewshire-Council-led scheme, saying it 'combined painstaking research with clear community outcomes resulting in the greatest reward of all, civic pride'.

The fountain – notable for its distinctive walrus sculptures – was given to the town by the Coats family in 1868 and has been the centre piece of the Fountain Gardens ever since – but had fallen into disrepair over the years.



Paisley's Grand Fountain restored and honoured

The year-long work saw it taken off site and restored piece-by-piece, before being reassembled and restored to full working condition last summer.

The £650,000 project included funding from the Heritage Lottery Fund and Historic Scotland – and was delivered with great support from local groups Friends of the Fountain Gardens and the STAR Project.

The specialist contractors for the project were Wigan-based Lost Art Limited – who developed new techniques to improve the process of cast-iron restoration – and conservation engineer Jim Mitchell of Industrial Heritage Consulting Limited.

Among many other award winners industrial interest was well represented with:

Shortlisted for Restoration or Conservation – Coventry Transport Museum for its 1916 Maudsley Subsidy Chassis.

Shortlisted for the International award – Falkland Islands Museum and National Trust for its Historic Dockyard Museum.

Shortlisted for the Innovation Award – The Science Museum for its new gallery Information Age.

Hope for Leeds Temple Mill

Historic England have launched a study, to be published next year, which aims to come up with solutions for the reuse of a selection of West Yorkshire's textile mills – especially those on the Heritage at Risk Register.

One example is Temple Mill in Leeds, a Grade I listed building. The main spinning mill has structural issues but there are now plans for it to become a leading cultural venue. Built in an Egyptian style and once housing the largest room in the world, it is one of the most unusual and instantly recognisable textile mills in Yorkshire. Parts of the building are used as an arts venue but the main spinning mill has serious structural problems.

Historic England is working with developer Citu and Leeds City Council on a plan for it to be a cultural venue at the heart of a residential and commercial development.

Tammy Whitaker, Historic England's planning and conservation director for Yorkshire, highlighted Prospect Mills in Thornton and part of the Lister Mills site in Bradford as other sites where Historic England is looking to find



Leeds Temple Mill

solutions to bring buildings back into use.

Two of the main buildings at Lister Mills were converted into flats before the credit crunch and subsequent recession.

Victorian tin box factory to be knocked down

Southwark's planning committee resolved unanimously that permission should be granted for a scheme at 67-71 Tanner Street to build an eight-storey copper and zinc-clad tower designed by Create Design & Architecture.

The existing building on the site dates from 1872 and was formerly Wyatt & Co's tin box factory. Until recently it was occupied by Tower Bridge Antiques.

Planning officer David Cliff told councillors that the Victorian building has 'some townscape merit' but said that it is 'not considered to be of such quality and such significance to justify its retention'.



Tanner Street tin box factory

Mr Cliff said that the council had received a last-minute submission from the Victorian Society who objected to the demolition of the factory on the basis that it is a 'characterful historic building' that would be 'capable of sympathetic conversion'.

The developers will make a £300,000 payment to the council in lieu of affordable housing. Such payments are normally only triggered by developments of 10 or more homes, but some of the proposed flats in the new scheme are so large that planners believe that more homes could have been fitted in to the same size building.

The Arts Council Prism Fund

The PRISM Fund 2015/16 is now open for applications. The Preservation of Industrial and Scientific Material (PRISM) Fund awards grants towards the costs of acquisition and conservation of items or collections which are important in the history and development of science, technology, industry, and related fields. The PRISM Fund can offer grants of up to £20,000, or 90 per cent of the total project costs.

The fund has helped hundreds of non-national museums and preservation groups in England and Wales acquire or conserve thousands of objects of industrial or scientific

importance. It was established in 1973 in response to the growing concern that technological change was resulting in the loss of much of Britain's industrial heritage.

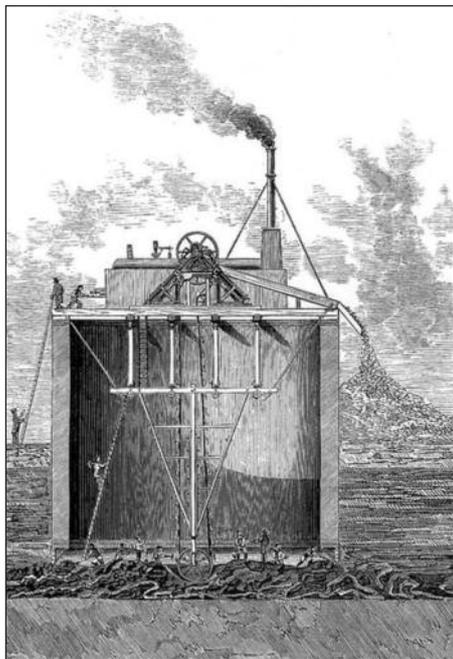
For more information google arts council prism fund.

Brunel's Rotherhithe shaft ready for music

The Brunel Museum – which is dedicated to the legacy of both Brunels – has unveiled plans for the Rotherhithe shaft to allow it to become a regular venue for music performances, theatre and events.

London architecture studio Tate Harmer has designed a new staircase that will allow the public access to the floor of the sunken shaft in Rotherhithe – the original entrance to the world's first underwater tunnel, which now forms part of London's Overground rail network. The new staircase will replace the temporary arrangements using a scaffold tower and stairs which lead down to the new concrete floor which has been built over the tunnels.

The shaft was created by the then novel technique of building a brick tower on a massive iron ring and allowing it to sink under its own weight, at the rate of a few inches per day, while excavating inside. The downward progress of the shaft became one of the most popular and fashionable sights of London.



Section of Rotherhithe shaft during excavation showing powered bucket elevator.

Fodder for the Adaptive Reuse Award?

Historic buildings and the historic quarters of major towns and cities are the very places where new ideas and new growth are most likely to happen. They have a greater concentration of businesses linked to the creative and knowledge economy, the most productive sector of the UK

economy (recent Department for Culture Media and Sport figures show that the creative industries are now worth £76.9 billion per year to the UK economy). In England creative industry businesses are 28% more likely to be found in listed buildings.

In April 2013 the HLF launched a brand new funding programme to be known as 'Heritage Enterprise' to tackle 'problem buildings' which may have lain vacant or derelict for some time. It directly addresses the kind of 'market failure' experienced by many vacant historic buildings, by providing the gap funding needed to make this type of project economically viable. Some of the projects HLF has funded through Heritage Enterprise seek to house creative uses in underused historic buildings, such as:

£3.7m to Harvey's Foundry (Cornwall) to create office spaces for high quality jobs in ICT, marketing, graphic/digital design and other creative industries;

£4.5m to Ancoats Dispensary (Manchester) to provide workspace for creative and knowledge-based companies.

Given the clear potential for more historic buildings to house creative industries businesses and the major economic impact these new uses can deliver, the HLF is keen to see more applications of this type coming forward.

The Heritage Alliance Heroes Awards 2015 is now open for applications

The Heritage Alliance Heroes award scheme was established to celebrate the outstanding contribution to society made by heritage volunteers in England. It is now in its sixth year; previous recipients include Howsham Mill, Preston Bus Station, Bluebell Heritage Railway, Gorton Monastery in Manchester, and the SS Shieldhall in Southampton.

The Award scheme is open to all Alliance member organisations and their members. Entries should demonstrate a distinctive achievement in the past 12 months by a voluntary individual or team. Applying or nominating couldn't be easier – simply submit a short nomination form and send to Alliance Trustee, Denis Dunstone, denis.dunstone@talktalk.net. The deadline for applications is 15 September 2015.

The winner will be asked to present a five minute video showcasing their achievement at The Heritage Alliance's AGM & Heritage Day on 3rd December 2015. The winner will also receive a memento of the event.

The Heritage Alliance Heroes Award 2015 is sponsored by Ecclesiastical Insurance.

Students work at Marsden lime kilns

Eight archaeology students from Newcastle University have begun developing a conservation management plan for Marsden Lime Kilns in South Tyneside.

The kilns are owned by civil engineering firm Owen Pugh as part of its limestone Marsden Quarry site. The plan will look at the long-term care, conservation and maintenance of the site which is listed but also on English Heritage's At Risk register.

The students' work is part of the Heritage Skills in Education Project organised by the North of England Civic Trust and funded by the Heritage Lottery Fund. The project works with schools, colleges and universities across the North East to inspire and inform young people about careers in the built heritage sector through a programme of visits to historic sites and practical craft activities.

The students' work coincides with plans being developed by South Tyneside Council, along with English Heritage and Owen Pugh to restore the kilns to ensure their long-term protection.



Students at the Marsden lime kilns

Photo: ian.macphotos.co.uk

Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review*.

- Bristol Industrial Archaeological Society Bulletin*, 144 Spring 2015
- Bristol Industrial Archaeological Society Journal*, 47, 2014
- Construction History Society Journal*, 30/1, 2015
- Cumbria Industrial History Society Bulletin*, 91, April 2015
- Dorset Industrial Archaeology Society Bulletin* 42, May 2015
- Friends of St Aidan's BE1150 Walking Dragline Newsletter*, 73, March 2015
- Greater London Industrial Archaeology Society Newsletter*, 277, April 2015; 278, June 2015
- Hampshire Industrial Archaeology Society Focus on Industrial Archaeology*, 84, June 2015
- Hampshire Industrial Archaeology Society Journal*, 23, 2015
- Histelec News: Newsletter of the South Western Electricity Historical Society*, 59, April 2015
- Historic Gas Times*, 83, June 2015
- Irish Railway Record Society Journal*, 186, February 2015
- Leicestershire Industrial History Society Newsletter*, 2/10, Spring 2015
- London's Industrial Archaeology*, 13, 2015
- Midland Wind and Watermills Group Journal*, 34, 2015
- Midland Wind and Watermills Group Newsletter*, 111, April 2015
- National Association of Mining History Organisations Newsletter*, 72, June 2015
- Northamptonshire Industrial Archaeology Group Newsletter*, 134, Spring 2015
- North East Derbyshire Industrial Archaeology Society Newsletter*, 58, May 2015
- Piers: the Journal of the National Piers Society*, 115, Spring 2015
- Scottish Industrial Heritage Society Bulletin*, 74, March 2015
- Search: the Bulletin of the South Wiltshire Industrial Archaeology Society*, 101, March 2015
- Somerset Industrial Archaeological Society Bulletin*, 128, April 2015

- Suffolk Industrial Archaeology Society Newsletter*, 128, February 2015; 129, May 2015
- Surrey Industrial History Group Newsletter*, 205, May 2015
- Sussex Industrial Archaeology Society Newsletter*, 166, April 2015
- Sussex Mills Group Newsletter*, 166, April 2015
- Trevithick Society Newsletter*, 167, Spring 2015
- Yorkshire Archaeological Society Industrial History Section Newsletter*, 94, Late Spring 2015
- Welsh Mines Society Newsletter*, 72, Spring 2015

Books

The Picturesque Railway, The lithographs of John Cooke Bourne, by Matt Thompson, The History Press, 96pp, 64illus. ISBN 978-0-7509-6094-6, £15.99 paperback.

Very nearly all of Bourne's famous lithographs from the 'The London & Birmingham Railway' and 'The Great Western Railway' have been reproduced at about half scale in this nicely produced book. An introduction puts the original work and Bourne himself in the context of the development of the railways in their early days. Each reproduced plate has its own commentary which picks up on the technical details which are depicted. So much detail to study!

The Industrial Heritage of Northampton's Boot and Shoe Quarter, by Peter Perkins, 52pp, num. illus. 6 maps, ISBN 978-0-9576647-2-2, available from Jane Waterfield, 6 Bakers Lane, Norton, Daventry, NN11 2EL newsletter@northants-iag.org.uk, £10 plus £1.50 p&p. Cheques to NIAG.

A comprehensive gazetteer of over 100 surviving buildings and sites mostly within the Conservation Area based on three walks conducted by the author. Each building listed has a thumbnail picture and a description with notes on the business and site history. Excellent maps together with a glossary and an index of names.

The Cloth of the World

NWIAC 35: The 35th CBA North West Industrial Archaeology Conference will be on Friday 25 September. The theme of the day is 'The Cloth of the World: the archaeology of the Lancashire weaving mill'. The venue is the Mechanics Institute in Burnley. There will be talks in the morning on key sites, machines and processes followed by a tour of the Weavers' Triangle in the afternoon. Cost is £10 without food and £15 with food. For a booking form please email m.d.nevell@salford.ac.uk'

Heritage of Industry

Places are still available on the two remaining H of I events for 2015

- A City Safari to Norwich & Great Yarmouth 17-20 September
- A pre-pre-conference tour to the Engineering Heritage Australia bi-annual conference November/December in Newcastle, NSW.

This will start in Sydney and head west through the Blue Mountains to Bathurst visiting the Zig Zag Railway and the associated railway workshops. Then south to Tumut with more railway interest and a number of historic bridges. There will be a special visit to one of the Snowy Mountain hydro plants. Around Canberra there are a number of interesting sites including the NASA Deep Space Communications Complex. Goulburn has engines which are hoped to be in steam. Return will be via Port Kembla where an interesting dock extension is taking place.

THE AIA ON TWITTER

The AIA is now on twitter @AIndustrialArch if any twitter-savvy members would like to follow us or contact us that way. The account isn't constantly monitored, but we'll try and reply to messages as soon as we can. We'll also be happy to retweet industrial heritage news from members, so either tag us in your message or use the hashtag #loveindustrialheritage and we'll do our best!

2015 EUROPEAN INDUSTRIAL AND TECHNOLOGICAL HERITAGE YEAR

**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

**4 September 2015
PRE CONFERENCE SEMINAR**

Valuing and sustaining Britain's Industrial Heritage. See page 14

**5 – 9 September 2015
AIA ANNUAL CONFERENCE,
BRIGHTON**

**6 – 11 September 2015
TICCIH CONGRESS LILLE**
Industrial Heritage in the twenty first century
ticcih-2015.sciencesconf.org/?lang=en

**25 September 2015
NORTH WEST IA
CONFERENCE**

Mechanics Institute, Burnley
The Archaeology of the Lancashire Weaving Mill. See page 23
m.d.nevell@salford.ac.uk

**26 September 2015.
ARKWRIGHT SOCIETY
CONFERENCE
CROMFORD MILL,
DERBYSHIRE**

Industrialisation and society in Britain in the era of the industrial revolution cromformills.org.uk. See page 14

**30 September – 3 October
2015
XVII INTERNATIONAL
CONFERENCE ON
INDUSTRIAL HERITAGE**

Gijon, Asturias, Spain
www.incuna.es

**10 October 2015
INDUSTRIAL HERITAGE FAIR**
Essex Industrial Archaeology Group
Braintree District Museum, Manor Street, Braintree, CM7 3HW
For more details email
essexiag@gmail.com

**10 October 2015
EMIAc 89**
Swannington
See below

**31 October 2015
DEVIZES INDUSTRIAL
ARCHAEOLOGY
SYMPOSIUM**
Devizes Town Hall

**27 November – 3 December
2015
NEW SOUTH WALES**
Tour organised by Heritage of Industry to precede conference organised by Engineering Heritage Australia
To enquire or register interest email
info@heritageofindustry.co.uk

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*



INDUSTRIAL ARCHAEOLOGY NEWS
(formerly AIA Bulletin ISSN 0309-0051)
ISSN 1354-1455

Editor: Chris Barney

Published by the Association for Industrial Archaeology. Contributions should be sent to the Editor, Chris Barney, The Barn, Back Lane, Birdingbury, Rugby CV23 8EN. News and press releases may be sent to the Editor or the appropriate AIA Regional Correspondents. The Editor may be telephoned on 01926 632094 or e-mail: aianewsletter@btinternet.com

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.

EMIAc 89 – New Sights at Old Sites
Old Railways, Coal Mining and Windmills

Saturday 10 October at Village Hall, Main Street, Swannington, Leics LE67 8LQ

Talks on 'Recent developments at Califat Colliery' by Denis Baker, 'Latest additions to Hough Mill' by Roger Bisgrove, 'The Coleorton Railway' by Fred Hartley and 'Leicester and Swannington Railway today' by Bill Pemberton. Followed by lunch and an afternoon of visits.

Swannington was once the centre for all the early (from the 13th century) coal mining activities in NW Leicestershire. The village achieved prominence in

1829/32 with the opening of the Leicester and Swannington Railway which was promoted by local mine owner William Stenson and John Ellis of Beaumont Leys in conjunction with George and Robert Stephenson.

Organised by the Leicestershire IHS and the Swannington Heritage Trust. Google 'EMIAc 89' for booking form and more information



Painting velvet at L'Atelier du Solerie as seen on the Rhône trip

Photo: Bill Barksfield