

INDUSTRIAL ARCHAEOLOGY NEWS

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THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

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INDUSTRIAL ARCHAEOLOGY NEWS 178 Autumn 2016

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Tel: 01952 416026.

E-mail: secretary@industrial-archaeology.org

Website: www.industrial-archaeology.org

COVER PICTURE

Gin for lifting oil from a shallow well re-erected at Ploesti Oil Museum. The earliest wells at Romania date back to the 1850s. Remarkable similarity to gins illustrated by John Bourne in his drawings of the construction of the London to Birmingham Railway.
photo Bill Barksfield

AIA Spring Tour Romania, 16-22 May 2016

When the invitation from Heritage of Industry dropped into my inbox inviting me to join the AIA Spring Tour to Romania, I knew this one was trip I had to join. Since the early 1990s I had travelled all over Eastern Europe, and Romania was the only country in the area that I hadn't visited.

Nigel Grizzard

What did I know of Romania? Perhaps most important was the link with Ceausescu. In terms of the cult of personality his was all over Romania as an absolute ruler from 1967 until he ended up being shot, with his wife, on 25 December 1989. Then there were the many Romanians working in the UK – in the restaurants, coffee shops and as taxi drivers. I had taken a Uber taxi across London; the driver was from Iasi – pronounced Yash – and so we discussed my forthcoming trip.

On the 0625 from Stansted most of the people on the flight were Romanians returning home. My neighbour on the next seat was a taxi driver from Newmarket who told me he had worked in the UK for the last five years. Across the aisle was a grandmother, mother and daughter, aged only four months, going to see her relatives in Romania for the first time. Nearly everyone looked smart; they were going home and had to make a good impression.

Many people describe Romania as 'coming out of the shadows' and this was part of my reason for going. How much change had there been since the fall of Communism, what was this European nation really like and what was the Industrial Heritage that we were going to visit?

The rest of our group were due to arrive later in the day so I had a chance to explore some of Bucharest – a city of two million people built in the French style with huge tree lined avenues and a parliament building, Ceausescu's folly, so

enormous that it dwarfs everything else you see. The Ibis hotel provided great views of his 'palace' and was a good central location for exploring the city.

Bucharest was a city full of cars, not the old ones that I had seen on previous trips to Eastern Europe but new BMW's, Audis, Volkswagens, Peugeots, Renaults, Fords and the Romanian built Dacia. Cars are important in Romania and wherever we went the streets were full of them. The wide avenues help the traffic flow and especially impressive are the timers on the tops of the traffic lights telling drivers how long they have to get across on the green light and how long they have to wait for the red light to change.

Back at our hotel in the evening I met the rest of our party – we numbered forty people; thirty six from the UK, three from the USA and one from Ireland. The next morning we were to head north out of Bucharest to the city of Ploesti. We also met our guide for the week, Dana.

Dana was very proud of Romania; she rattled off facts and figures about the country, both in the past and the present; she liked its art, its cultural heritage and its scenery, but until we arrived I don't think she had given much thought to its industrial heritage. She understood we were a British group here to visit Romania, but couldn't understand why we were more interested in old factories and blast furnaces when there were so many castles and true tourist sites that we should be visiting.

Key facts learnt from Dana included that the population of Romania had fallen from 23 million at the time of Ceausescu to 20 million today – caused not just by many Romanians leaving to seek new work opportunities in Europe but also by a sharp drop in the birth rate.

Our first stop was the oil city of Ploesti. Romania started pumping oil in 1857, two years



Water 'powered' whirlpool for dyeing and washing woollen fabrics

photo Chris Barney



Replica California Stamps at Rosia Montana

photo Chris Barney

before the United States, and in the 1930s was Europe's largest oil producer. We were to visit the City's Oil Museum and on arrival there, we were told that Michael Portillo had visited the previous day with a film crew – so no doubt Ploesti will feature in one of his future travel programmes.

Travelling north we reached Brasov also known as Kronstadt because of the large Germanic influence or Brasso, the Hungarian variant of the name – a common practice in many of the places we visited.

Brasov, like many Romanian cities is impressive – full of historic buildings but also multi storey blocks of flats. A place where tourists spend days – but for us there was only time for lunch and a walk in the square.

Then back on the bus to visit La Valtori, Lisa, a water powered mill where local wool is prepared and woven into blankets. During the manufacturing process they are washed and dyed in small timber lined whirlpools. Raising the nap is achieved by passing the cloth over a bed of thorny brushwood. The set up with the antique machinery still in working order reminded me of the town of Galashiels in the Scottish Borders, where small craft weavers make individual textiles.

Distances in Romania are large and the first day we covered 330 km from Bucharest to Sibiu, a historic city, in the heart of the large region of Transylvania.

Next morning after another long drive we arrived at the village of Rosia Montana – an area

high up in the hills where since Roman times gold has been mined. A Canadian company – RMGC, the Rosia Montana Gold Corporation have plans to redevelop the whole area to form the world's largest open pit goldmine. The potential yield is just a few grams per ton and the operation would involve slicing the top off the mountain and destroying the whole village of Rosia Montana. The plans are currently on hold but the village has been blighted as RMGC has already bought up many of the houses which now lie empty.

We visited the underground workings of the Roman era and were taken on a tour of the village, before lunch provided by the local community. Our visit was a chance to see the clash between a Canadian Mining Corporation and rural life in Romania.

Where the future is for Rosia Montana is unclear, but to the outside visitor it seems strange for the need to destroy a whole village and way of life to mine for gold.

After another 250 km we were in Hunedoara – one of Romania's steel towns. Developed after WWII, the town's function was to produce steel in a similar way to Nova Huta outside Krakow in Poland, or the Attercliffe area of Sheffield. Like steelworks in many countries, nearly all of Hunedoara's steel mills have closed down, the only steel mill left being operated by international conglomerate ArcelorMittal.

The town has undergone an environmental renaissance – free of pollution, the workers' houses and bungalows had been given a makeover and were now what a UK estate agent would describe as 'a selected development of bijou homes'.

Our local guide Oana Tiganea, had studied the development of Hunedoara and was keen to show us both the past and present and particularly the soviet style housing. As one of Eastern Europe's key steel towns it was even visited by Soviet Premier Nikita Khrushchev with an official Soviet delegation in 1962 and there had been a famous banquet. The hall where this took place was now undergoing a renaissance to become a wedding and function palace.

Hunedoara was looking forward to a new life, cleaner and greener, but also facing the question – what is the town's future role and who creates the jobs. Similar questions to those being asked in former steel towns in Britain.

Leaving Hunedoara, we went to nearby Govajdia to visit an enormous nineteenth century blast furnace built between 1806 and 1810. An important monument, it worked for over 100 years and had produced some of the iron for the Eiffel Tower.

From Govajdia we started our journey back towards Bucharest, first returning to the city of Sibiu for two nights. The Astra Museum of Traditional Folk Civilization on the outskirts of Sibiu is a 96 hectare park full of exhibits, including many small mill. I was particularly fascinated by the 'floating mills' that could be used on Romania's larger rivers for milling grain. They could be transported easily to wherever the grain was, rather than the grain being transported to the mill.



Soviet era housing at Hunedoara

photo Chris Barney

The next day we visited three key sites. The Sadu Hydro Energy Museum is a hydroelectric power plant, set in magnificent scenery, and opened in 1896. It was built by German engineers and used Budapest built (Hungarian) machinery. Still working as a power plant, it is testimony to a forgotten world of engineers and machines which could, and still are, able to be repaired with spanners and screwdrivers.

From Sadu we journeyed to the small town of Avrig, to visit the glass factory. Employing over 200 people, the factory produces glassware that goes to outlets all over Europe. Wine carafes were on the line when we visited and the inspection and quality control was impressive. Business looked brisk and next time I am in one of the UK's designer outlets I must remind myself to look at the packaging to see if the glassware came from this factory in Romania.

Our final stop of the day was at the Sibiu railway museum. As we were on a large coach, it was impossible to navigate the road entrance to the Museum. We returned the kilometre to the station and then set off walking across the railway tracks, an esoteric pleasure denied us in the UK and on our short walk we saw all sorts of rolling stock, some modern, some ancient, but nearly all in use. At the rail museum there were a number of old steam locomotives, laid up for years, but our group's attention was drawn to the engine house for the diesels. These engines had been built in Craiova by Electroputere, Romania, and are still working on Romania's railways. For the rail buffs, the Craiova Works produced for British Rail, the first 30 locomotives of the Class 56 diesels. We were very fortunate to see the railway turntable in action as a diesel reversed

into the rail shed and another came out to go into service on the tracks. A truly memorable end to a memorable day.

Our final day together was spent travelling back to Bucharest but before lunch we paid visits to two more sites. First to a section of the narrow gauge Sibiu-Agnita railway where a small enthusiastic group have restored a small section of the line, managing to do so with very limited resources. They are now able to take visitors on this length and are working hard to extend it. It was good to be able to support their efforts in a small way. The second call was to a water powered corn mill at Ohaba which had been built in 1873. One pair of stones was operating as no doubt they had for many decades. It was not a 'restoration' but just the mill working as it always had.

Lunch was at Bran, home to Bran Castle, a national monument in Romania and known as Dracula's Castle. Back in Bucharest, it was one of their regular 'night of the museums', when the city's numerous museums stay open until 1.00 am with free entry, and as we arrived in the city, long lines of people were forming waiting to enter.

On the last day before the afternoon flight home, the party split into two groups. Half of us took a tour around Ceausescu's monstrous palace, said to be the second biggest building in the world (after the Pentagon). The Romanian parliament occupies a small section but we never found it. At the dictator's death it was only 80 percent complete but it was decided it would be cheaper to finish rather than blow it up, though many Romanians would have liked to do the latter. We were open mouthed at the scale and sumptuousness of it all. The other group visited



Govajdia furnace

photo Bill Barksfield

the observatory, not normally open to the public, but which the group was able to visit thanks to our guide, Irina's contacts. The obvious enthusiasm of the guy who showed us around as well as its intrinsic interest made this, some said, one of the highlights of the whole tour.

Flying back to Stansted from Bucharest, I had a chance to reflect on my week in Romania. The old world had gone, the Soviet influences had faded and the younger generation – those aged under 27 – had not lived under a communist regime. Romania had come out of the shadows; it is now a fully European nation. To take part in the tour was a privilege, a chance to see a part of the world that has made vast strides in the last three decades.

Thanks should go to Sue Constable for all her hard work getting the itinerary together; and to Heritage of Industry whose organisation was, as usual, impeccable and to Dr Oana Tiganea who led us in Hunedoara and Dr Irina Iamandescu who led the group in Bucharest. Thanks also to our guide Dana and coach driver Mihai who drove us safely over 1,000 kilometres, the many Romanians we met who told us proudly about their museums, sites and factories and all the participants who made our week in Romania so interesting and informative.



Blowing and moulding decanters at Avrig SA

photo Chris Barney

**VISIT THE AIA
WEBSITE**

www.industrial-archaeology.org

More of the sights seen on the
AIA tour of Romania



*The Sibiu Railway Museum
photo Nigel Grizzard*



*The group listens to Mihai Blotor, Chairman of the Friends of the Mocanica Association
who are working on restoring a section of the Sibiu-Agnita narrow gauge railway
photo Bill Barksfield*



*Bucharest Filaret Technical Museum
photo Peter Stanier*



Bran Castle – Dracula's home

photo Chris Barney

Asbestos dangers

Asbestos has been mined and used throughout history, but at the height of the industrial period it was revered as a wonder substance. It was imported into Britain in vast amounts to use as an insulating material and as a heat retardant. It was used liberally in workplaces, public buildings and houses to prevent the spread of fire. Because of this, wherever our industrial heritage can be found – there is a risk that asbestos will also be present.

Sarah Walters,
Derbyshire Asbestos Support Team

It was so ubiquitous in the mid-late twentieth century that the substance continues to be a problem and to put lives at risk. It is estimated that during the last century, more than six million tonnes of asbestos were imported into the UK. Even as late as 1997, 4,320 tonnes were shipped into the country over the course of the year.

The Health and Safety Executive website currently gives an estimate of 5,000 for the number of people dying from asbestos disease each year in the UK.

At Derbyshire Asbestos Support Team (DAST), we have spent the past fourteen years dealing with the consequences of asbestos use in the East Midlands. Exposure to just a few asbestos fibres can lead to Mesothelioma 20-30 years on. Prolonged exposure can lead to lung cancer, asbestosis or pleural plaques. We were originally set up to provide support to those affected by these diseases. However, because the legacy of asbestos is so great we have increasingly worked to raise awareness. Over the past couple of years we have produced interactive computer programmes about asbestos in the home and in schools. A collaborative article in a vintage magazine made us think more about historical artefacts and asbestos. The renovation of old buildings and the collection of remnants of our recent past is a popular activity and may be putting many people in danger.

DAST successfully approached the Heritage Lottery Fund with a project that would allow us to collect and share information about 'Our Asbestos Heritage'. We visit those affected by asbestos disease in their own homes and so we build up a relationship with them. We began the project by asking them to complete a questionnaire telling us where and how they had



All these boilers would have been swathed in asbestos

been exposed to asbestos. From here, we have been able to compile a list of where asbestos was used and what it was used for. Along with photographs, this enables us to share information that draws attention to where it might still be present.

Most people have been exposed to asbestos in the course of their work. Because our charity focuses on the East Midlands, many people responding to our questions worked in the industries traditionally associated with this region. However, we have accepted completed questionnaires from others outside our region and also some of those responding have retired here from other parts of the UK. From our responses, the most common industries or trades affected are

- Railways
- Power Stations
- Plumbing
- Ship building and repair
- Engineering
- Joinery

Working in the railway industry was a common cause of asbestos exposure in the responses to our questionnaire. This may be partly because we cover the city of Derby – the site of a massive works that employed a large proportion of residents. We heard from people who told us that asbestos was used for lagging the boilers and pipes of steam engines, and for lining the carriages. The amount of dust meant that it wasn't just those directly handling the substance that were affected. Even when the works moved into the diesel era, asbestos was still used in the locomotives.

Asbestos was also used on the wider rail infrastructure, as a visit to a railway preservation site in Derbyshire showed. The train shed has one of those corrugated asbestos roofs, familiar from the typical 1950s suburban garage that so many of us remember from our youth. This was probably thought to be a sensible precaution, given the heat generated by the engines to be stabled beneath it.

Lincolnshire and the Trent Valley have several power stations that were built to meet the twentieth century's increasing demand for electricity. And of course their processes also generated huge amounts of heat, which was controlled with asbestos products. As with the steam engines of the railway, all of the boilers and pipes were lagged with the substance.

Wrapping asbestos around pipework to insulate it means that plumbers in all fields of work have been greatly affected – through actions such as pipe maintenance and renewal. This particularly applies to ships. According to a BBC News report from 2012, the Medway towns have the second highest rate of asbestos deaths in the country, which is attributed to the Chatham Dockyard. It is not just the large ships that were affected. Asbestos was also used in smaller pleasure craft as well as in caravans.

Derbyshire is also home to a brake manufacturer that employed several people who were later affected by asbestos disease. Although these products are most associated with vehicles, all braking systems from the mid-late twentieth century may be affected – lifts are one example. One of our questionnaire respondents worked at a coal mine where he was exposed to asbestos dust from the conveyor belt braking system. Mr T describes how he would repair brake shoes by stripping off the old lining and riveting a new one in place – a very dusty job.

A lot of the asbestos that was used has been safely removed and disposed of by professionally licenced workers. Where the material remains in situ it is thought to be safe if it is undisturbed and undamaged. This is less problematic in some of the uses – a corrugated asbestos roof is less likely to be disturbed than a sheet of asbestos insulation board used as an internal wall. Many school teachers have been diagnosed with mesothelioma after pinning children's work to classroom walls. It is therefore very important that if this kind of material is to remain in place, everyone using the area is made aware of the implications and safety procedures are in place. If you are responsible for a building which contains asbestos, you have a duty to manage the risk correctly.

The Health and Safety Executive website is the place to turn to for initial advice. They have a set of downloadable guidance sheets and a list of approved contractors – who must be called in for removal and disposal. There is also a helpful diagram of an industrial property which highlights all of the places where asbestos might be found – right down to the toilet seat and cistern. If you have any portable objects that are contaminated (for example WW2 gas masks, ironing boards, talcum powder tins) then you should refer to your local council waste disposal site.

At Derbyshire Asbestos Support Team, we hope that you will now bear asbestos in mind while working with our industrial past. Pipework, boilers, conveyor belts, lifts, factory buildings and vintage transport should all be approached with care – especially if they have not been subject to renovation. If any readers have any experiences that they would like to contribute to the project, then please do visit our website and download a questionnaire. Use the contact page on our website if you would like a supply of our leaflets to put on display.



From Cornwall to Mexico technology transfer

From Spanish colonial times, the silver mines of Real del Monte and Pachuca were the lifeblood of their towns. Their bonanza was a promise of life; their closure meant abandonment and decline. So the inhabitants of Real del Monte were filled with high hopes when the English Company of Adventurers in the Mines arrived to this ailing town in 1825, having sailed from England with 1,500 tons of equipment manufactured at Hayle and Perran in Cornwall including nine steam engines with their large boilers. Real del Monte came back to life.

Belem Oviedo Gámez, Directora Archivo Histórico y Museo de Minería, A.C.,
TICCIH National Representative

The landscape was transformed with engine houses and steam boilers, wooden head frames and smoking chimneys. At the beginning, the thundering boilers and the billowing smoke were confusing and intimidating; afterwards they became a symbol of certainty.

The English company focused on the Dolores, Guadalupe, Santa Teresa, Santa Brígida and San Cayetano mines in Real del Monte. Later, it was Mexican entrepreneurs who worked the mines of Pachuca on a large scale, with the help of Cornish steam engines; the Rosario mine, with more than five engine houses, was a symbol of wealth and on-going productivity in the 1860s.

Nineteenth century buildings, testimony to advanced English technology, are still standing. During the twenty first century, they have been transformed into a site museum and will host design and arts and crafts workshops organised by the Archivo Histórico y Museo de Minería, A. C. The building that used to house the offices of the Company of Gentlemen Adventurers in Pachuca, is now home to an elementary school.

The Company of Gentlemen Adventurers left in 1849, but its workers and employees did not. Cornish immigration remained constant until the first half of the twentieth century. Three of the four Cornish engine houses which are still standing were built during the second half of the



The Purísima Shaft of the Corteza Mine, Pachuca, with Mexican miners lined up outside in 1899

Photo: AHMM, A.C. Phototeque

nineteenth century: Acosta, Corteza and San Pedro La Rabia. The Acosta mine, with architectural vestiges from the eighteenth to the twentieth centuries, was turned into a site museum in 2001 by the Archivo Histórico y Museo de Minería, A.C.

In 1886, tin mining within the county of Cornwall began declining steadily, sparking severe economic and social problems and triggering the exodus to countries with a mining tradition. The money sent from various mining centres around the world, of which Mexico was one, aided and strengthened the economy of the English county, which managed to overcome the crisis.

In Pachuca, the Methodist School, built in 1877, and the Episcopal Methodist Temple, built between 1882 and 1900, are important architectural monuments dating back to this second wave of immigrants with the architectural features of the latter making it the only example of Romanesque and Neo-Gothic styles in Hidalgo's capital.

In 1896 Francis Rule, a very influential mining entrepreneur born in Cornwall, commissioned the construction of one of Pachuca's most emblematic buildings, known as the Casa Rule, which since 1985 houses Pachuca's Town Hall.

This cultural and industrial Cornish heritage, combined with the technological, architectural and cultural contributions of the many Mexicans and also Americans who worked in this mining district, constitute one of Mexico's most important industrial heritages. This has been acknowledged in the Ruta de la Plata (Silver Trail) Project organised by the Historical Archive and Mining Museum.

Hidalgo and Cornwall, apart from making significant contributions to the English and Mexican economies, have given the world a cultural and industrial wealth that is helping to revive both former mining communities and is slowly but surely being appreciated once again.

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Engines of Prosperity: new uses for old mills A warm welcome to:

A report published by Historic England on 30 June calls for more developers and owners to take on mill regeneration.

Textile mills have helped to define the identity of West Yorkshire for many generations. The first mills emerged in the late eighteenth century as the Industrial Revolution started to shape the landscape, economy and communities of the region. Few settlements in West Yorkshire are not influenced in some way by their

relationship with 'the mill', and the same holds true for many rural landscapes. They were the original Northern Powerhouse.

Engines of Prosperity: new uses for old mills calls for action from developers, textile mill owners and public bodies to work together to maximise the potential of the region's historic textile mill buildings to bring benefits to local communities and the economy.

Timothy Brinton, Macclesfield
Martin Chandler, Ashford
Elaine Sansom, Haywards Heath
Christine Nicasi, Cardiff
Michael Boyd, Bishops Cleeve
Anthony Pilling, Lancaster
Ben Thomas, Wolverhampton
Pete Glews, Dudley
Christopher Moon, Tewkesbury
Rita Ruiz, Ciudad Real, Spain

Who have recently joined the Association

Completion report on the Douglasfield Engine project Dundee

Leisure and Culture Dundee worked in partnership with Dundee Industrial Heritage in connection with The High Mill at Verdent Works to conserve and re-display the Boulton and Watt steam engine.

Known as the Douglasfield Engine because it was once used at Douglasfield Bleach Works, it had most recently been in storage. An initial report was commissioned to assess the condition and the feasibility of reassembling the engine.

In July 2014 grant funding of £20,000 was received from The Association for Industrial Archaeology, £40,000 from Museums Galleries Scotland and money from The Heritage Lottery Fund towards the conservation, installation and interpretation of the engine.

Geoff Wallace of Geoff Wallace Conservation was appointed as the Conservation Engineer. He spent a week working with Rhona Rodger (Social History Curator, Leisure and Culture Dundee) and Louisa Atahari (Curator, Dundee Industrial Heritage) identifying, documenting and labelling all the components of the engine.

John Compton (a retired Curator from National Museum Scotland) who had been responsible for the rebuild of another Boulton and Watt Beam engine at The National Museum, Edinburgh, was asked to research the Boulton and Watt archives in Birmingham to see if the information there could assist in the rebuild or interpretation of the engine.

Lost Art of Wigan were appointed to conserve the engine, prepare it for display and finally to re-

erect it at the Verdent works. After much consideration as to whether to do the work in situ or to take it to The Lost Art workshop, the engine was removed from Dundee and transported to Wigan at the end of December 2014.

At this stage, sub-assemblies of the engine were put together as far as possible in order to identify missing components. This also allowed for checking of the identified components against the list provided from the original storage of the parts and the identification of missing parts that had previously been included in the specification.

Where components originally produced from cast iron were missing, patterns were made and replacement castings produced in the foundry. Where non-cast components were identified as requiring replacement, production of these was also undertaken at the Lost Art workshop. Where existing components were used these have been subjected to careful cleaning.

All metal elements once cleaned were painted according to the agreed paint specification of zinc-rich primer, followed by a further application of coats of an undercoating primer, in preparation for the top coat.

The specification for the timber tank that encloses the air pump and condenser has been modified to reflect the research undertaken by John Compton. This has been cut away to allow the public to see this unique element of the Boulton and Watt engine.

The engine arrived back in Dundee from the Lost Art workshop in Wigan at the end of July 2015. The concrete pillars and foundations had

been prepared by the builders and architects of the High Mill project in conjunction with Lost Art. During the erection, consideration had to be given by Dundee Industrial Heritage to railings which were commissioned to blend sympathetically with the mill. Consideration also had to be given to health and safety in the maintenance of the engine by volunteers and paid members of Dundee Heritage Trust.

Operational and maintenance manuals have been produced and training for operatives has been given as part of the installation process

High Mill at Verdent Works has a comprehensive education package which engages with the public who visit the mill and have the opportunity to see this internationally significant machine working five times a day for ten minutes. In addition they are given the opportunity to see a video of the engine working and an explanation of how it was used in the jute industry.

Dundee Industrial Heritage has expanded its schools programmes to include themes of Boulton and Watt, engineering, mechanisation and power and have developed new workshops and resources catering for early years to senior pupils. The steam power workshop has proved popular and is enabling Dundee Industrial Heritage to attract secondary school visits for the first time. They have also started a Young Engineers Club aimed at 11-16 year olds with after-school science and hands-on problem solving with experts.

Battersea Waterworks Pumping Station

Sometimes referred to as the Cringle Street pumping station, this building was just to the east of the much larger and more famous electric power station. Listed grade II in 1994, it was probably the second oldest surviving water pumping station in England after Kew Bridge.

Listed building consent for demolition of this pumping station was granted in August 2011 on condition that demolition should not start before contracts were let for new buildings on its site. The actual demolition took place in the autumn of 2014, relatively unnoticed.

Robert Carr

It is claimed that English Heritage launched its 2014 Buildings at Risk register at an event at Battersea Power Station in October while demolition of the pumping station was proceeding close by. It is not likely that new buildings will be put up on the site of Battersea pumping station for some time. The building was cleared to make a route for the transport of spoil, from the Northern Line extension works to the riverside. It is expected that up to 25 barges a week will leave there, each carrying about 1000 tonnes of earth to Goshems Farm, East Tilbury.

Here it will be used to create arable farmland. It is expected that a total of about 600,000 tonnes of earth will be excavated during the project.

This is an example of how architecture and style take precedence over engineering. Battersea Power Station is indeed iconic and well known to the general public. And of course the architect is none other than Giles Gilbert Scott who designed Liverpool Cathedral. Television has associated the power station with the glamorous world of the 1930s, streamlined railway locomotives and vintage sports cars. The waterworks pumping station, historically important as it was, was not such a dramatic building as far as the average viewer was concerned.

In the case of Battersea it would have been a choice between the pumping station and the power station, which is now listed grade II*. The latter is a well known London landmark – visible from a wide area – and now often illustrated in literature promoting tourism in London. It is even beginning to achieve a status comparable with the Eiffel Tower in Paris. A new £1.52 commemorative postage stamp has been on sale in Post Offices since 7 July 2016. The stamp shows Battersea Power Station as it was in 1976 with now demolished buildings in the foreground. By

comparison, the pumping station was relatively unnoticeable, even obscure.



Battersea Waterworks pumping station 1991

Photo Tim R Smith

Prehistoric salt mining in Austria

On a recent holiday looking at Iron Age sites and artefacts we visited the salt mines in Austria at Hallein and Hallstatt. While the visit to the mine at Hallein followed the usual tourist tour, at Hallstatt we were privileged to visit the archaeological dig taking place in the prehistoric mine workings, led by the archaeological supervisor, Hans Reschreiter. It was fascinating. It is likely that the salt was first exploited in the valley during the Neolithic, period evidenced by the discovery of a 7,000 year old antler pick in the area. However it may only have been the surface deposits which were being used.

Rosemary Hughesdon

The earliest evidence for mining is from the Middle Bronze Age but by then large scale underground mining was fully developed, with three mineshafts in simultaneous use. Not all the workings can be explored, as abandoned areas gradually close due to the pressure underground; only those areas where mudslides filled the voids can be excavated.

The place to which we were taken was one such area in the Bronze Age workings, which were exploited by digging a vertical shaft down to the salt deposits and then excavating huge caverns to extract the salt. The shafts were very large – one having a cross section of 23 x 7 metres. The archaeologists can only speculate as to the reason for the large size, but the thought is that it would allow for two-way traffic in the shaft and provide better ventilation.

The salt was mined using bronze picks, set in knee haftings. The interesting question was: how were these used? If one tries to use them as one would a modern pick it just doesn't work as the only part of the tool to contact the deposit, whether floor, wall or ceiling, is the angle of the haft. Fortunately, the previous week, a Russian visitor



Hans Reschreiter wields a replica pick



Replica back pack

had made a suggestion based on a type of Russian scythe! His suggestion was that the tool should be held horizontally and the miner then rotates from the waist while also using a wrist action on the hand nearest to the head of the pick to bring the pick downwards towards the salt. This method does indeed work. If anyone has any further useful suggestions, Hans would love to know!

Wooden shovels and scoops were used to gather up the excavated salt and transfer it to backpacks. These backpacks were unique. Unlike the backpacks of today they only had one shoulder strap; on the other side was a wooden handle. This was held in the hand and could be quickly released to empty the pack without removing the strap. At the shaft the salt was



Rope of lime bast with hand for scale

emptied on to a piece of woollen cloth which was tied with rope and then hoisted to the surface. A long piece of four centimetre thick rope of lime bast is preserved in the workings – it is estimated that it had a breaking strain of over a tonne! Leather palm protectors (small pieces of leather with a hole cut out for the thumb) were used to protect the hands.

For lighting, the miners used bundles of thin laths of pine or spruce bound together at one end. After use these were discarded on the floor of the workings, together with broken tools and other waste. These waste deposits can be metres deep.

The pièce de resistance is a large and unique structure described variously as a ladder or staircase. By the time we saw it the pressure had begun to distort it and the main timbers had been removed; however a replica outside the Hallstatt Museum gives an idea of how it was constructed. It was designed as a kit of parts which could be taken down the mine as individual components and constructed in situ. It comprised long straight timbers for the sides, each with a slot cut lengthwise into it. Into these slots were threaded the cross members, which lay alternately upright as treads and flat as spacers. As the structure was at an angle of around 45 degrees, anyone ascending would stand on the edge rather than the flat of the treads. This is borne out by finds of shoes, which are worn not at the toe or heel, but beneath the arch.

Further Bronze Age remains have been found above ground which have been identified as brine curing pits for salting pork. This too was done on a huge scale with each trough able to process between 150 and 200 carcasses at a time. So far eight such pits have been identified.



Replica ladder

all photos Rosemary Hughesdon

It appears that the Bronze Age mine collapsed in the thirteenth century BC and there appears to be a gap of about 300 years before the Iron Age workings started. However, as before, these new workings, which differ markedly from the earlier ones, appear as a fully developed system. The Iron Age mining was carried out by driving horizontal adits into the mountain to follow the veins of salt. These mine galleries were vast – one is 170 metres long, by up to 27 metres wide and 20 metres high. The miners continued to use bronze for pick heads albeit a high tin (10% or more) alloy, which made for a hard, if brittle, implement. However, the extraction techniques were different. The salt was no longer extracted as rubble, but as large plates. These were produced by making a heart shaped groove around the section to be removed and then extracting the two half hearts, which can vary considerably in size. The only two of these plates known weigh 12 and 42 kilos respectively. The salt waste was ignored. It would appear that mining finally stopped in Hallstatt around 400BC.

For me this absorbing visit was a highlight of my trip.

This article first appeared in the Newsletter of the Surrey Industrial Archaeology Group. Many thanks for their kind permission to reproduce it.

Woodberry Wetlands

In North London, a water-supply reservoir has recently been opened to the public as a nature reserve. In IANews177 there was a brief description of the work on the 'Coal House' which was partly funded by an AIA restoration grant. A fuller account of the Woodberry Wetlands project and the New River scheme follows.

Robert Carr

The New River, essentially a late-Elizabethan scheme for a water supply channel built in a similar manner to a Roman aqueduct, was constructed during the reign of King James I. Following the 100 ft contour, it first brought good drinking water to London in 1613. This great undertaking proved successful and over the centuries highly profitable for its shareholders. As more and more water was required in London, many of the meanders of the original New River were straightened out. In 1767 Robert Mylne was appointed chief engineer to the New River Company and was succeeded by his son William Chadwell who served in this capacity from 1810 to 1861. Both also practiced as architects.

At some times of the year and especially during winter, the water of the New River became murky, caused by run-off from the surrounding countryside and villages in its vicinity. In order to ameliorate this problem two large settling reservoirs were built at Stoke Newington in North London, just to the east of Green Lanes. These were quite substantial, about 38 acres in extent, and more than 20 feet deep in parts.

The work was completed in 1832 and the procedure was as follows. The water of the New River was first diverted into the East Reservoir, where sediment was allowed to settle. It was then transferred by gravity, with the aid of a steam engine, into the West Reservoir where further settlement took place. Following these two stages of natural cleansing the water was then turned once again into the channel of the New River and continued its way south to the terminus at New River Head, Islington.

A public highway, Lordship Road, runs through a 'cutting' roughly north-south between the two reservoirs, which here are impounded by earth banks. The steam engine was housed in a pumping station on the east side of Lordship Road at the top of the east bank.

Twenty years later the Metropolis Water Act of 1852 required water companies to filter their water. In response The New River Company built substantial sand filter beds to the south, immediately to the west of Green Lanes. From then onwards, following filtration, drinking water was pumped to New River Head and to customers in the locality, through underground pipes and south of Stoke Newington the old course of the New River gradually fell into disuse.

The remarkable Castle pumping station on the east side of Green Lanes, built in 1854-56 in



Woodberry Wetlands – the coal house is behind the trees at the bottom right

a baronial style by William Chadwell Mylne and listed grade II*, was equipped with six large rotative beam engines for pumping the water. The much smaller pumping station of 1831 on Lordship Road, situated between the East and West Reservoirs, was gradually superseded and apart from one small outbuilding, now known as The Coal House, was demolished, probably by 1900.

In the twentieth century the water of the East reservoir was chemically treated to inhibit the growth of fresh water mussels which blocked water pipes. This treatment reduced the amount of wildlife that might otherwise have flourished there. The practice came to an end in the 1970s and in recent years the East Reservoir has become something of a haven for wildlife, now incorporated as the Woodberry Wetlands nature reserve, recently opened to the general public.

The first pumping engine installed at Lordship Road in 1831 was a single cylinder non-rotative marine type engine of 25 hp made by Boulton, Watt & Co. The New River Company obtained this engine second hand. It was originally built for the South Level Commissioners, for Eau Brink Cut. This was a major civil engineering work to shorten the course of the River Great Ouse above King's Lynn. Robert and William Chadwell Mylne were engaged on this scheme as engineers so the connection with the New River is obvious.

Later this 25 hp engine was used for water supply as well as for reservoir use and as the workload of this engine continued to increase it became inadequate. A more powerful single cylinder rotative beam engine of 50 hp was ordered from James Watt & Co in 1847. This engine was in use at Lordship Road for more than 30 years being last used there in the 1880s.

This building was recently known as the 'gas house'. It is now called The Coal House. The reason for the former name is presently unclear.

The surviving outbuilding from the Lordship Road pumping station at TQ 326 874 was probably used for the storage of coal and as a workshop. It might even have been used for preparing food as the directors of the New River Company seem to have been fond of dining at

Stoke Newington and there were facilities at the East Reservoir for this to take place. This would probably have been in the summer months when the directors made a tour of inspection of works in the locality. It must have been a tranquil and very delightful spot in years gone by.

If coal is stored in a building, the coal tends to push the walls out. This can be rectified by using iron tie rods to pull the walls back into place and there are a number of these inserted through the Coal House at Stoke Newington. The building was probably put up about the time the Boulton & Watt rotative beam engine was installed in 1848. There is a charming amateur watercolour 'taken in August 1843' which depicts the first pumping station, which at least in this illustration has a rustic character. In 1843 there was no building on the site of The Coal House. In 1835 local residents paid for the chimney of the pumping station to be altered and the watercolour shows an extension increasing its height. There were a number of large houses in the neighbourhood and the wind would have driven smoke towards their long back gardens which in those days stretched right down to the New River.

The Coal House was listed grade II in February 1975. Before its recent restoration it was in poor condition and on the English Heritage buildings at risk register. According to the listing details the south end of the building had been in use as a workshop.

Outside, on the north wall of the building there is an impressive imitation-stone panel with entablature and pediment. Quite large, it has a frieze with wolves' heads and carries an inscription recording the building of the reservoirs in 1830 – 33 by William Chadwell Mylne. There is documentary evidence that this panel was probably cast on site. In July 1839 a minute notes that cement 'in imitation of stone' was delivered to the engine house here at a cost of 60 guineas, quite a sum at that date; a workman would earn less in a year. Here we have evidence of how the New River Company viewed itself in the first half of the nineteenth century – as successor to the Romans.

This commemorative panel is probably not in its original location. It could well have been attached to the pumping station which was demolished towards the end of the nineteenth century, but saved, and moved to the north end of the only surviving building.



Coal House looking South West

Photo R Carr

As previously mentioned The Coal House was in a poor state of repair until recently but funding from many organisations such as the Heritage Lottery Fund and the Association for Industrial Archaeology has enabled it to be restored to good condition. The rebuilding has been substantial; the walls have been underpinned and repointed, the commemorative limestone panel on the north façade has been cleaned and the letters made clear using traditional stonemasons' techniques. From inside the building a new steel staircase leads to the roof, giving excellent views of the surrounding area. This roof terrace is not normally open to the public; people might be taken up there as part of a guided visit. The Coal House now serves as a learning space and café for visitors to the Wetlands which hopefully will ensure it has an income sufficient to maintain itself.

The Woodbury Wetlands, covering 11 acres, were officially opened by Sir David Attenborough on 30 April this year and the AIA were represented at this event. For a man of his age, Sir David spoke with surprising vigour extolling the virtues, indeed the necessity, of close contact with wildlife and the natural world. The Wetlands are still owned by Thames Water and the East Reservoir is still in use as part of London's water supply. The reserve was developed in collaboration with Thames Water, Berkeley Homes and the London Borough of Hackney. The site is managed by the London Wildlife Trust.

The Trust hope to implement similar schemes and one on a larger scale, 520 acres, is in progress at Walthamstow. This is due to open in 2017. There are several buildings of industrial archaeological importance here, including the Coppermill, converted into a pumping station in the 1860s, and the purpose-built Marine Engine House or Ferry Lane pumping station of 1894. It is proposed to build a new brick chimney at the Ferry Lane pumping station to replace the one demolished here about sixty years ago.

Thanks are due to Brian Hillsdon of the Newcomen Society for information on the steam engines installed at Lordship Road. Malcolm Tucker deserves special thanks for useful suggestions.

The restoration of the Salt Wagon for the Lion Salt Works Museum

On Monday 4 July, the Lion Salt Works Museum welcomed back its newly-restored salt wagon, in time to be the showpiece of its summer activities programme. Salt wagons, now a rarity, were once a common sight in the three 'wich' salt towns of Cheshire – Northwich, Middlewich and Nantwich. But now only a few people remember the distinctive wagons, with their pitch roof, designed to drain rainwater away from the salt bags. The £27,000 restoration of the salt wagon was made possible thanks to a £20,000 grant from the Association for Industrial Archaeology and was organised by the Lion Salt Works Museum's Trustees with restoration taking place at the Llangollen Railway and Carriage Works in Denbighshire, North Wales.

Nick Hunt, Chairman of Lion Salt Works Museum Trustees, said: "The salt wagon presented a considerable restoration challenge as it had been out in all weathers for decades. Added to this was the damage done by the salt to both the wood inside the wagon and its corrosive impact on the supporting metalwork. The restoration was painstaking but we are delighted by the results and extremely grateful to the AIA for their support. The wagon, which is located at the entrance to the Lion Salt Works will be a prominent and very fitting starting point for those visiting the award-winning museum."

The Lion Salt Works Museum, one of only three open-pan, salt-making sites in the world, tells the story of salt and its impact on people, industry and landscape. The Museum's wagon was probably made in the early 1900s. At this time, salt wagons were most frequently used on branch lines to transport the salt from the works to the main railway station; in this case, the two



Salt Wagon at Llangollen Railway workshops

miles to Northwich station. The wagons moved using a windlass housed in the Lion Salt Works' Pump House, powered by a horizontal steam engine (thought to be a 'Marcus Allen' engine, though there is no maker's name on it). The salt was then usually sent by rail to Liverpool; much of it would have been exported worldwide for use as table salt, for salting fish or for industrial purposes.

Bellamy's meat pies

One of our greatest Prime Ministers, William Pitt the Younger (1759-1806), is said to have uttered as his last words 'I think I could eat one of Bellamy's meat pies.' There is also a more official version 'O my country. How I love my country.'

The Bellamy's meat pie version comes from a House of Commons waiter who said he was called out of bed late one night by a messenger in a postchaise. He was told to get up and dress and bring some of the meat pies down to Mr Pitt at Putney. Even though travelling post-haste by the time the pies arrived Mr Pitt was dead.

Clearly Bellamy's meat pies must have been well known in 1806 and they seem to have been made for a considerable time after that. It is said that years ago, but within living memory, there was a painted advert for Bellamy's meat pies on a wall in the Earls Court Road (*Here is the connection with Industrial Archaeology – see IA News 176 page 7. Ed.*)

Painted signs can last a surprisingly long time, perhaps as long as a century, but even so it is absolutely astonishing that Bellamy's meat pies were being made for something like a hundred years.

We must also bear in mind that both accounts of William Pitt's last words might be fictitious. The patriotic version could have been political spin, prevalent even 200 years ago. The Bellamy's meat pie version could on the other hand be a masterstroke of advertising that might account for the pies popularity for a whole century?

Does anyone remember Bellamy's meat pies?

Robert Carr

Food processing is an important industry but with the exception of milling and brewing I have seen very little if any research on it, *Ed.*

The Sack House on the former Wantage Canal wharf

One of the entrants in this year's Best Creative Reuse of an Industrial Building award was the restoration of the sack hiring building on the Wilts & Berks Canal. Enormous numbers of jute sacks were needed in arable farming. Refundable deposits on all forms of packaging were normal throughout industry until recent times.

Bruce Hedge



The sack house was operated by the West of England Sack Hiring Company. It stood at the entrance to the wharf and basin at the end of the Wantage arm of the Wilts & Berks Canal. The canal ran from Semington on the Kennet & Avon canal to Abingdon-on-Thames, reaching Wantage in 1810. Useful to the GWR during construction of the Paddington to Bristol line, it was subsequently put out of business by that same railway. Wherever the two ran alongside each other, if the

canal had a wharf, the railway built a siding.

Coal from the Somerset field was the main reason for the canal's existence, but as is evidenced by some buildings in Wantage, good quality stone from the Bath region also found its way into the town. Agricultural produce found its way outwards, Clark's Flour Mill, now Wessex Flour Millers, is just across the road from the sack house. The canal and was formally abandoned by Act of Parliament in 1914.

After the draining of the canal basin at Wantage in the 1920s the site was used as a haulage and scrap yard until bought for redevelopment by Barrett Homes. The sack hire building was acquired by the Wilts & Berks Canal Trust for a nominal sum and the developers carried out the necessary extensive remedial works. A local team from the canal trust then set about refitting the building as an exhibition space promoting its aim of restoring as much of the old canal as possible. The only other building remaining from the old canal days is the Wharfingers house, now converted to residential.

The building measures 7 metres by 3.5 metres and is built largely of brick and roofed with slate. The developers were required to retain as much as possible of the original features and materials. Repainting was carried out using the original colour scheme determined by analysis of the old paintwork. The original sign of the sack hiring company has also been retained.

Internally, original wall plaster was kept where possible and where this could not be done three-coat lime plaster was used. The original

fireplace has been retained as has the internal door after appropriate repairs. Although information boards and displays have been put up on the internal walls the original structure is clearly understandable.

As part of the Wilts & Berks Canal Trust the building's future is assured. The Trust is a member of the Wiltshire, Swindon & Oxfordshire Canal Partnership which consists of all the local authorities along the former route, the Canal & River Trust, Thames Water, the I.W.A. and Natural England.



The earlier photograph shows the building as it was in the 1950s, clearly it would not have been still standing had not some remedial work been carried out between then and 2013/14 when the full restoration was carried out.

This entrant was not successful; the eventual winner will be announced in the autumn.

Cornelius Drebbel and the first submarines

The reconstruction of a Jacobean submarine designed by Cornelis Drebbel is a fascinating project. This kind of archaeological reconstruction is increasingly popular – the Dutch have built a replica c.1340 Cog which sailed across the North Sea in 2015.

Robert Carr

There are now only about thirty boatyards in Britain still building wooden boats. One of these is at Richmond Bridge on the tidal Thames where Mark Edwards and a team of boatbuilders maintain the tradition and have constructed some remarkable craft in recent years including the *Gloriana*, a 29 metre eighteen-oared shallow barge – and the *Drebbel*, an archaeological reconstruction to investigate the plausibility of claims that three submarines of increasing size were built in the early seventeenth-century and worked quite successfully in the Thames.

It was written at the time that the largest of these submarines could travel underwater from Westminster to Greenwich and back at a depth of 12-15 feet. Information is sketchy but it is claimed that Cornelis Drebbel had a means of absorbing carbon dioxide and even liberating oxygen.



The Drebbel

photo Colin Smith

Unlikely though this seems, there appear to be some quite reliable contemporary accounts.

Built for a BBC television programme in 2002, the possibility of rowing underwater was successfully demonstrated with two oarsmen at Dorney Lake, Buckinghamshire, using Mark Edwards' twenty-first century reconstruction – named the *Drebbel*, after its inventor.

Cornelis Drebbel (1572 – 1633) from the Netherlands was a most remarkable man who might in some ways be compared with Leonardo da Vinci. Drebbel took the King on a test dive in

the Thames making James I of England the first monarch to travel underwater. James seems to have been partial to underwater adventures. In 1617 he visited a coal mine at Culross in Fife and descended underground. He came up a shaft which was surrounded by the sea and was taken away by boat.

Drebbel built his three submarines between 1620 and 1624. The third and largest was propelled by six oars and could carry up to 16 passengers. Keep a look out for the Drebbel submarine replica; it has been on public display at several locations both here and in the Netherlands. Has anyone seen the Drebbel?

All this is beginning to sound rather like Dr Who. But people do forget. We only have to remember that until September 1976 we used to have a service of futuristic Russian hydrofoils on the Thames running between Tower Pier and Greenwich. Reminiscent of Jules Verne, this public passenger service has almost totally faded from popular memory. Until 2003 there was a regular airline service of delta-winged jet aeroplanes flying to New York and back, carrying a hundred passengers at more than 1,300 mph and a height of 60,000 feet. If you were rich enough a supersonic day trip to New York was a possibility. Does that sound like science fiction?

Speaking up for Industrial Archaeology

On 23 April the AIA held a workshop on 'Speaking up for Industrial Archaeology' in Ironbridge. The day was aimed at local heritage groups and volunteers who are involved in speaking up for industrial archaeology in their local areas. Speakers included members of groups who are involved in looking after a range of different sites (including buildings and buried sites) as well as national organisations who support groups involved in local advocacy, including the Council for British Archaeology and Civic Voice. The workshop was live-tweeted using the hashtag #AIAadvocacy.

The day started with an overview of the current situation for industrial archaeology in England by Dr. Mike Nevell (Director of Applied Archaeology at the University of Salford and AIA council member). This was followed by a rousing talk by Ian Harvey from Civic Voice about the Civic movement, how local groups can influence decision makers and why it is so important that we all speak up for the things that we care about in our local areas.

Then we heard from Elizabeth Heaton (Friends of Friar Gate Bridge) and David Moore from the Lichfield Waterworks Trust.

We continued with a session by Rob Lennox from the Council for British Archaeology (CBA) on national planning policy, how local groups can engage with the planning process, and the CBA's Local Heritage Engagement Network project.

There was some animated discussion over lunch before John Batchelor lead a session on social media 'the message and the medium'.

In the final session we heard from Tom Lonsdale (Save Butterley Spillway), Barry Tylee (Hunshelph Parish Council) and Andrea Grimshaw (Dig, Discover, Enjoy) about their experiences of local advocacy.

Finally, there was a panel discussion with the speakers, who took questions from the floor and shared their thoughts and comments on key issues.

And so ended an information-packed and animated day, which explored why it's so important that we speak up for industrial archaeology (perhaps now more than ever!) as well as outlining some of the challenges of doing this at a local level. The workshop also highlighted the importance of joint working and sharing information and experience across the sector.

Thanks again to everybody who contributed. We have already had some really useful feedback from the day, including suggestions for future workshops, and we went away energized and enthused about speaking up for industrial archaeology, and supporting the amazing volunteers who do so much to protect and celebrate our shared industrial past.

Tegwen Roberts

AIA Council meeting held in London 18 June 2016

Serious concern was expressed at the 18 June Council meeting over the problems with Taylor & Francis (T&F) and the confusion caused by the membership renewals. At the time of the meeting there were over 100 former members who had not renewed. Many had tried to but failed; many were confused by multiple demands and demands for the incorrect subscription. Clearly, T&F were unprepared for the task of taking over the several titles they acquired from Maney Publishing. Alternative membership management handling methods are under discussion, but for the moment the Association is working closely with T&F to resolve the immediate problems.

The idea of moving the publishing element away from T&F was rejected because of the advantages of the Routledge imprint and their considerable experience in selling the journal by electronic access to libraries and universities.

Other matters discussed and agreed:

Future conferences – South East Midlands, 25 – 30 August 2017. Contractual arrangements have been agreed with Moulton College, near Northampton. A number of themes have been identified including, transport infrastructure, the boot and shoe industry, ironstone industry and workers housing. There are a number of unique sites in the region such as the Cardington Airship hangers. Full details, booking forms, etc. will be issued early next year.

The main 2018 conference will be held in Caithness from 22 to 28 June and organised by Mark Watson. It was Mark who organised the highly successful Dundee conference in 2013. However, the Association's AGM will be held during a short two day event in Sheffield during September. Along with the AGM there will be the presentation of awards to the various winners, study visits and a presentation by an eminent speaker.

The production of gazetteers is an important part of the Association's work. Unfortunately, there will not be one for the South East Midlands conference. John Stengelhofen has produced these for many years, but, following his retirement, Council is investigating how future ones are to be produced.

Contact with our affiliated societies is not always easy, but is vital, so it was agreed that a brief article should be sent to each Society newsletter editor to raise awareness of the Association's work.

After the Ironbridge Practical Day on 23 April we set up a Survey Monkey (online survey) and sent it out to all the participants. Twenty-two of the 24 replied. Apart from a complaint about the room temperature and there being no refreshments on arrival, the conference was well received; 'informative and inspiring' was typical comment.

Six Restoration Grants, totalling £84,400 were approved; thanks to our anonymous donor for his continuing support.

Concern was expressed by our endangered sites officer, Amber Patrick, over the imminent departure of our contact at the Council for British Archaeology (CBA). We act as agents for the CBA and they notify us of threatened sites. In the past four months we were advised of 29 potential industrial sites; comments were made on eight cases.

As for the IA Review, it was reported that T&F's turnaround for the publication has been quicker than Maney's. From now on articles will be available online immediately they are ready, even if the printed version does not come out for twelve months or more.

Bill Barksfield reported on the proposed AIA/Heritage of Industry tour of Holland 15 – 21 May 2017. The Friday afternoon of that tour will see a joint Anglo-Dutch seminar. Because of the importance of this event it was agreed that a senior member of the Council (President or Chairman) would attend.

Historic England's Industrial Archaeology Panel no longer exists and has been replaced by an annual meeting, the first of which was held in April, email communications continue with an expert advisory group.

The next Council meeting will be on 8 October at Coalbrookdale.

Bruce Hedge

Report on All Party Parliamentary Group for Industrial Heritage

Despite the political turmoil following the EU Referendum, the All Party Parliamentary Group for Industrial Heritage (APPG IH) meeting went ahead on 29 June 2016. The Chairman, I think, was glad to have something different to focus on, but even so it was not surprising that only he and one other MP attended. As well as the Chairman, Nick Thomas-Symonds MP, and Christine Rees MP (Neath), the meeting was very well attended by the industrial heritage sector – even better than usual. The AIA was represented by Keith Falconer (Chair) and Tony Crosby (APPG IH Secretariat). Others attending included Miles Oglethorpe (Historic Environment Scotland) and Ian Bapty (IHSO), plus representatives of the Architectural Heritage Fund, National Museum Directors Council, Heritage Railway Association, Fakenham Gas Works and Waltham Abbey Royal Gunpowder Mills.

The Chair began by outlining his aspirations for the Group, its output and impact. He is suggesting three strands. The first is a concise *Manifesto on the Values & Benefits of the Industrial Heritage* which he would use as the basis of his introductory speech at the second strand/event, a Westminster Hall debate. The third strand/event would be a series of enquiry

sessions on *Sustaining the Industrial Heritage in Times of Austerity*. He envisages four sessions with up to five speakers at each to give evidence on particular themes such as the significance of British industrial history, the response of the national statutory organisations, funding for conservation of the heritage, and good practice examples. The proceedings of these sessions would then result in a report to Government. He hopes that this can all take place in the autumn.

Sir Neil Cossons then addressed the meeting and began by reiterating Britain's long and distinguished industrial history and heritage, which is well respected internationally, the UK being a role model for the conservation of its industrial heritage. He continued by recalling the public opinion survey which showed how important industrial heritage is to the public – most people have family connections to and roots in Britain's industrial past. If this heritage is valued it needs to be cared for in a sustainable manner and the stories which emanate from it need to be recorded and told. The industrial heritage needs to be preserved for future generations so that the monuments of the industrial era are understood in the same way as are Stonehenge, Hadrian's Wall, abbeys and country houses. Most sites are run by local voluntary groups and local authorities, and their sustainability is being challenged by austerity and generational change. There is a need, therefore to redefine what we are doing – it is no longer just about preserving interesting places and machinery, but championing how industrial heritage contributes to the economy, communities, the environment and education.

The need to engage with MPs and Peers was reinforced so that they understand the wide range of benefits that can be achieved when conserving the industrial heritage and a number of good practice examples were mentioned including Middleport Pottery and the Portland Works in Sheffield.

Tony Crosby

2016 Restoration Grants

This year the Association has allotted the £20,000 to the Leigh Building Preservation Trust towards the restoration of their magnificent Yate and Thom engine £8,500 to the Dawn Sailing Barge Trust for restoration of the foc'sle, £20,000 to the Friends of Hemingfield Colliery for repairs to their winding house roof; £1,000 to the Penistone Cinema Organ Trust for their Melotone Electrostatic unit; £20,000 to the Norfolk Mills and Pumps Trust which will go to Billingford windmill for repair to their stocks and sails and £20,000 to Wheal Martyn Trust for their 18 foot waterwheel. This is a total of £84,400 for 2016 and the Association is profoundly grateful to our anonymous donor who, during the last seven years has provided over £350,000 for restoration projects which has attracted a further £80,000 in gift aid.

Another award for Crofton pumping station



Peter Stone of the Transport Trust watched by Jon Willis of Crofton.

On Saturday 25 June a Transport Trust Red Plaque was unveiled at Crofton pumping station on the Kennet & Avon canal. The plaque highlights the importance of Crofton's engines in the story of Britain's industrial past.

The Transport Trust is the only national charity to promote and encourage the preservation and restoration of the country's transport heritage in all its forms. The unveiling was to have been done by Sir William McAlpine, President of the trust but, owing to ill health he was unable to attend. Instead the unveiling was done by Peter Stone, one of the leading trustees. By way of consolation a smartly dressed Phil Harding, of Time Team fame, was among the assembled guests. There have been 85 Red Plaques awarded so far, one third of which have gone to waterways schemes.

Whilst there I was able to view the restoration of the boiler-water feed pond to which the Association made a grant of £7,000. There are still a few problems with leaks and it has since been discovered that the pipework from the boilers is badly corroded. The

pond was created about the time of the installation of the 1812 Boulton & Watt engine, so not too surprising that after 204 years hidden problems have come to light.

Another problem the pumping station has is that the whole of the bottom section of the boiler will need re-ripping during this winter before the boiler inspector will permit steaming in the 2017 season. The total cost of this is estimated at £27,500. An appeal has been launched and anyone who wishes to donate can do so on the Crofton Pumping Station web-site.

Crofton, however, is not stuck in the past; it is investigating the field of 'mechanitronics'. One definition might be: 'an approach aiming at the synergistic integration of mechanics, electronics, control theory and computer science in order to improve and/or optimise functionality'; or, as it was explained to us, combining new technology with Crofton's 200 year old technology. I look forward to further unveilings at the pumping station!

Bruce Hedge.

Message from the Chairman Keith Faulkner

Encourage your MP to attend the APPG

I urge all members to lobby their respective MPs to attend future meetings of the All Party Parliamentary Group on Industrial Heritage. The Chair (Nick Thomas-Symonds, Lab.) hopes to set up an enquiry at the October/November a meeting which should result in the publication of a report to Government on the values and benefits of the industrial heritage.

Letters

Prefab help wanted

Would you like to help us build our national archive? There are free training places and volunteering opportunities with the Prefab Museum's Heritage Lottery Fund project.

The Moving Prefab Museum and Archive project is about collecting stories, recording memories and photographs about prefabs and making them available for others to enjoy, now and in the future, through a national archive, on our website and through an interactive map.

Individual stories and photos are often the only link to our own and collective past, to what went before us; the photo or a story passed down the generations. Wherever we go people want to share their happy memories of living in their prefab.

Would you be willing to help us record memories and stories of prefab residents, and put them into an archive for future generations? You will learn about interview techniques, how to use recording equipment (including smartphones and tablets) and how to make the archive accessible.

Free training places in oral history techniques and aspects of archiving are available and we will be running archive workshops so we can catch up on all the latest acquisitions! We may not be able to track down and document all the 156,623 prefabs that were manufactured and erected across the UK, but with your help we can have a good try!

Every week people tell us about prefabs we didn't know existed. We have been directed to prefabs still lived in or long demolished, on farms, used as storage, catteries, as holiday homes or clubrooms, and links to community archives or

Facebook groups. We put them on our map and where they have a history, a photo or memory attached it makes them come alive.

Many local, regional and national archives are being digitised and made available online. Can you help us find information about prefabs through these and other resources to enrich our collective knowledge?

The training is free. The first date is 20 August 2016 for oral history training, at St John's Community Centre, Glengall Grove E14 (2 minutes from Crosssharbour DLR station). Lunch and refreshments are provided at the training and the archive workshops; also we will pay for your travel expenses to and from the venue. We hope to meet Prefab scouts at our UK-wide events.

Find out more by contacting
prefabmuseum@gmail.com

Elisabeth Blanchet

More holes in doors

I don't know whether there have been any answers to Robert Carr's holey door puzzle (*IA News 168*), but I have one suggestion. I have recently re-opened an old doorway in my house, which had been sealed on the inside face by a panel of early chipboard. It had been roughly hand drilled from the face with a random pattern of 1/2 inch holes to give a good key for lime plaster, the first coat having been reinforced with a layer of hessian prior to the final skim. The attached image shows the rear of the panel, with plaster still bedded in many of the holes. It would have worked just as well on a boarded door.

John Boucher

News from Cornwall

The first house to be lit by gas is to receive an extensive renovation thanks to Heritage Lottery funding. Murdoch House in Redruth was where William Murdoch, at that time working for Boulton and Watt in Cornwall pioneered the first practical system of gas lighting in the world. The building is now occupied by local Charity Redruth 2000 and used for educational and community purposes. A grant of £9,950 will fund a full refurbishment of the building and website.

The National Trust team at Levant Mine which is exploring ways of opening up parts of the mine to visitors have discovered a mound of domestic rubbish on a level between two shafts. The rubbish includes bedsteads and old fridges. Some of it has been there for 30 years. The pile which could be 50 feet deep also includes cattle bones, possibly from a beast falling down the shaft. Workers installing a wooden platform some 15 metres from the surface found the carcass smashed by a Belfast sink thrown into the shaft. Removal of the rubbish which needs to be checked for hazardous substances will require a crane with a grab which can operate in a space as tight as two metres by a metre. A quantity of miners' tools has also been found.

March saw yet another report that South Crofty Mine could be reopened. A Canadian company, Strongbow Exploration has an agreement giving it the right to acquire the mine from administrators. South Crofty has an active mine permit valid until 2071. Strongbow has an agreement with Galena Special Situations Master Fund Ltd, which is the hedge fund arm of Dutch commodities giant Trafigura, and the only secured creditor of Western United Mines, holder of the mine permit and currently in administration.

2016 sees the tenth (tenth?) anniversary of the Cornish Mining World Heritage Site. Part of the celebrations will see a colossal steam powered 'man engine' puppet stride the length of Cornwall, leaving Tavistock on 25 July and arriving at Geevor Mine on 6 August. The 'man engine' is a cast iron Cornish miner standing 40 feet tall. Miners and bal-maidens in costume will animate the machine stoking its furnace as it steams through Cornwall. See goldentree.org.uk for details.

Geevor Mine reports that visitor numbers in 2015 at 43,063 were the highest in its 22 years as a heritage site and up 21% on the previous year. Much of this is due to the efforts of Pendeen Community Heritage which manages the site with the underground tour the main attraction, taken by 98.5% of site visitors. However, there is a suggestion that the presence of a certain Cap'n Poldark in the vicinity cannot be discounted as a reason.

Graham Thorne

Waltham Abbey Royal Gunpowder Mills

Waltham Abbey Royal Gunpowder Mills is the site where for over 300 years until 1991 gunpowder and other explosives were continuously produced, and where research and testing were undertaken. It is now a protected site, being in part a Scheduled Ancient Monument, having 22 listed buildings and an SSSI, and is open to the public to enjoy and learn about its history. A very popular education programme is provided for local schools. However, for a number of years now the visitor attraction has been losing money, having to be subsidised from an endowment set aside when the Trust that manages the site was established. Discussions have, therefore, been taking place to find a way to make the site financially viable, and continue to preserve and conserve this internationally important industrial heritage asset. There is no doubt that the site is at risk and, particularly a number of the important buildings, both listed and not listed.

A way forward has been proposed which involves a commercial young people's outdoor education provider taking over a number of the historic buildings, part of the outdoor space and building new accommodation. This would provide WARGM with income which could be used to subsidise the visitor attraction, leaving the interest on the endowment to fund preservation and conservation work. A planning application was submitted along with an application for a grant from the Heritage Lottery Fund. The planning application was considered in early June but was refused. This means that the site remains at risk, although discussions are underway as to the next steps to be taken to secure the future of this important site, its structures and public access.

Frome Silk Mill Restoration plaque unveiled



The completion last year of the conversion of the Frome Silk Mill into a creative hub with 224 arts and craft studios and its popular exhibition and events space, was one of the successful entrants in the first year of the AIA's Creative Re-use of an Industrial Building Award. The Association celebrated the European Industrial and Technical Heritage Year 2015 with the launch of this award and a plaque marking the success of the Silk Mill was unveiled on Wednesday 27 April.

The restoration of the Silk Mill, the gateway

to the Saxonvale site, has been a remarkable achievement that began some ten years ago when Damon and Kate Moore acquired the derelict mill which had lain empty and unloved for over 30 years. The opening of the new Silk Mill Gallery in 2008 in the adjacent laundry block was to prove a watershed in the restoration project. The community support generated by holding events including exhibitions, workshops and musical performances proved a key component in the renovation of the main four-storey section of The Silk Mill. Extensive external masonry and roof repairs were followed by beam and joist renovations and a team of volunteers, led by members of the Moore family, built a huge spiral staircase, laid the floors and replaced each of the 72 windows like-for-like.

Keith Falconer, AIA Chairman, accompanied by AIA Award judge Mark Watson of Historic Environment Scotland and many of the Silk Mills tenants, toasted the award of the plaque and Keith congratulated Kate and Damon Moore for spearheading the growth of alternative creative sectors in Frome with the restoration of the Silk Mill.



Presentation of award to Frome Silk Mill. Damon Moore holds certificate, Kate Moore is below the wall plaque. AIA Chairman Keith Faulkner is between them.

Training to manage historic ships

In 2014, National Historic Ships UK, in partnership with a range of traditional vessel operators, launched a project under the title, 'Shipshape Heritage Training Partnership' (SHTP). The aim of this Heritage Lottery Funded project was to help arrest the decline in the traditional seamanship skills that are integral to the future of the UK's operational historic vessels.

Over the course of the two year training scheme, a skills mapping exercise was carried out to identify the specific skills that the SHTP trainees needed to operate and maintain the five historic vessels in the scheme. This included examining the sailing skills whilst at sea and the practical skills needed when laying up and maintaining the vessels over the winter months.

HLF grant to Prefab Museum

The Prefab Museum has received £73,600 from the Heritage Lottery Fund for an exciting project, *The Moving Prefab Museum and Archive*, based in London. Led by Elisabeth Blanchet and Jane Hearn and supported by prefab enthusiasts from across the UK, the project will focus on post-war prefabricated homes and their former and current residents to document and create a national archive which celebrates prefabs and prefab life.

The project will enable former and current prefab residents to tell their stories of lives lived in extraordinary homes, and will provide opportunities to be trained in prefab research, archiving and oral history. Through events across the UK the project will discover locations, information and precious memories of prefabs which will be shared through quarterly newsletters, on a website with an interactive map and catalogue, and a physical archive.

2016 marks the 70th anniversary of the Temporary Housing Programme and, although only supposed to last for 10-15 years, some prefabs still stand, lived in and loved by their residents! Starting life in an empty prefab in March 2014, the Prefab Museum tells a story that resounds today – of housing shortages and innovative solutions that were embraced by their residents and paints a picture of social, domestic and working-class life from 1946 to the present day.

Time is running out for the remaining prefabs as the original occupants grow older and more frail and their homes scheduled for demolition and redevelopment. The museum aims to record and document this important part of post-war recovery and our shared social history.

Commenting on the award, Elisabeth Blanchet, joint director of the Prefab Museum, said: "We are overwhelmed with happiness and gratitude to have received the support of the Heritage Lottery Fund and are confident that through this project we will elevate the post war prefab to its rightful place as a national treasure!"

The former British Ambassador, Sir Alan Collins, said: "Prefabs are a key part of our social history. They played a vital role in providing accommodation after so many houses were destroyed in the 1939-45 War. They were home for a generation of children. I know as I was one of them! I am delighted therefore that the Heritage Lottery Fund has agreed to help with preserving such an important aspect of Britain's heritage."

Neil Kinnock, said: "Prefabs were built rapidly to provide brilliantly designed, comfortable, affordable homes. When one was allocated to my family in 1948 we escaped terrible housing and felt blessed. I'm delighted that the Fund is helping to preserve this truly precious and practical part of the people's heritage. Who knows, they might show how to combat a housing crisis in this century?"

See letter on page 15

Greatness Mill

In Kent, in August 2015, the remains of a corn mill and its outbuildings, a decrepit survival, were almost totally cleared away. What will happen next?

Robert Carr



Greatness Mill before demolition

In Mill Lane at TQ 534 568 in Bat & Ball, Sevenoaks, Kent, a remarkably ramshackle mill complex survived until very recently – in fact until August last year. In 1980 you might just have seen such a mill, but it was quite an astonishing sight by 2010. Just what this site looked like can readily be appreciated from the current version of Google Streetview which was taken in October 2014.

A survey of the mill complex was carried out by Wessex Archaeology circa 2007. This is currently available on the Internet and contains excellent plans and some photographs. There was a scheme, approved by the local authority Sevenoaks Council, to demolish most of the buildings on the site but to retain the main mill, the Mill House and mill cottage. The Mill itself was listed grade II but was delisted recently.

Greatness Mill was established as a silk mill in about 1760 by Peter Nouaille, a Huguenot. The silk business prospered for a time but by 1828 the manufacture of silk had come to an end and the mill then functioned as an ordinary corn mill and continued to do so into the early twentieth century. Unfortunately it was almost totally destroyed by a fire in 1928. It was then completely rebuilt on the same footprint so that the exterior closely resembled the original but modern materials were used for the interior. Following rebuilding the mill probably operated as an electrically driven roller mill.



New houses under construction

The plan approved by the local authority was to demolish almost everything on the site but to rebuild the mill itself so as to retain its original character. Google Streetview clearly demonstrates that it was quite a prominent landmark, particularly looking south along Mill Lane. Changes to the interior were allowed in order to convert the building for residential use because, being constructed from relatively modern materials, this aspect was not regarded as historic.

However, in late August 2015 a local newspaper, *The Sevenoaks Chronicle*, carried the shock horror headline 'Diggers move in as iconic Sevenoaks mill is destroyed to make way for 26 new homes'. According to the article which followed the mill was completely demolished except for the walls at ground floor level and rag stone and brickwork detailing.

A recent visit to Mill Lane revealed that apparently ordinary houses were being built on the site – see photograph. The mill cottage

had disappeared, and there did not appear to be any rebuilding of the main mill taking place.

This might be a misunderstanding of what is actually going to happen; it could be that rebuilding of the main mill has not yet



Greatness Mill and mill cottage gone

photo R Carr

commenced. Do we have a local member who could report on what is happening here? If this mill site is to be almost totally destroyed it would be a sad loss for Kent. However, it might also be argued that what was demolished last year was a mere replica of little value.

Sandfields pumping station

Good news from the Lichfield Waterworks Trust, formerly known as the Friends of Sandfields Pumping Station. The trust is now in negotiations with Persimmon Home Ltd and is working to agree a licence for access to undertake a site investigation/assessment study that will last six months. The site was sold to Persimmon PLC in 2003 who signed a Section 106 planning agreement stating: 'It is intended to include the Pumping Station within the development at Chesterfield Road, retaining the listed part of the property and demolishing the newer structure. The beam engine would be left in its original setting and the structure refurbished to include toilet and parking facilities.'

The trust see the issue of the licence as the first stage of an ongoing process to hand back Sandfields Pumping Station to the public, and a significant step towards protecting this unique piece of industrial heritage. It has been a very long haul.

The trust was formed in 2015 with the object of restoring the pump house and its 1871, 150hp Cornish engine which could pump two million gallons a day against a head of 355 feet. It has a 65 inch cylinder and a nine foot stroke. It remained in use until 1927 when it was replaced with a set of two Sultz horizontal Uniflow steam engines.

The building which is grade II* was designed by Edward Adams of London. As with other water supply schemes of that era it was a somewhat belated response to appalling outbreaks of cholera in the South Staffordshire towns of Dudley, Walsall, Tipton, Bilston and Wednesbury.

T.W. Rammell, Inspector of the Central Board of Health reporting on Wednesbury in 1851 stated: "The natural sources of water have mostly failed and been diminished by reason of the mining operations carried on in the parish and neighbourhood. Consequently the inhabitants suffer a want almost amounting to destitution in regard to this important element, having to send, in many instances, a great distance to procure it and at a very considerable expense. The poorer people are generally obliged to use water lying in stagnant pools, filthy and unwholesome in the extreme....endemic and contagious diseases prevail at all times".

ERIH UK meeting

On 8 June, twenty delegates from England, Wales, Scotland and Ireland met at Great Dunmow Maltings in Essex for the Summer 2016 ERIH UK Chapter Meeting. Excellent presentations about 'Crowdfunding' and 'Heritage Crime' were well received by delegates and generated lively discussion. These presentations can be downloaded by going to the ERIH website.

Appeal from the President of TICCIH

The International Committee for the Conservation of Industrial Heritage

Making the most of and expanding our strong relationship with ICOMOS, International Council on Monuments and Sites

As part of our continuing effort to contribute to the conservation of industrial heritage worldwide, and arising specifically from the recently renewed Memorandum of Understanding between TICCIH and ICOMOS, I ask for your consideration and action. We have agreed and are determined to enhance our relationships with ICOMOS on both the national and international levels. As a key part of those relationships, we need to maintain explicit liaisons with relevant officials and bodies. In particular, I urge you to promote the awareness, acceptance and application of the Dublin Principles (Joint ICOMOS – TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes).

This advocacy can certainly be accomplished at the national level through direct contact with national governmental and NGO officials, and that is surely a desirable action. However, we believe that we can increase effectiveness by working with our ICOMOS partners, especially in countries where ICOMOS has a strong established position in general heritage matters, but may not be advocating currently for industrial resources. Our intention is to leverage existing relationships to multiply impact and attention to industrial heritage.

Thank you,

Patrick Martin TICCIH President

An abbreviated version of the Dublin Principles

Joint ICOMOS – TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes

Adopted 2011

Preamble

Around the World, a great diversity of sites, structures, complexes, cities and settlements, areas, landscapes and routes bear witness to human activities of industrial extraction and production. In many places, this heritage is still in use and industrialisation is still an active process with a sense of historical continuity, while in other places it offers archaeological evidence of past activities and technologies. Besides the tangible heritage associated with industrial technology and processes, engineering, architecture and town planning, it includes many intangible dimensions embodied in the skills,

memories and social life of workers and their communities.

The global process of industrialisation over the past two centuries constitutes a major stage of human history, making its heritage particularly important and critical to the Modern World. Precursors and beginnings of industrialisation can be recognized in many parts of the world well back into ancient times

The industrial heritage is highly vulnerable and often at risk, often lost for lack of awareness, documentation, recognition or protection but also because of changing economic trends, negative perceptions, environmental issues or its sheer size and complexity.

Over the past decades, growing research has greatly contributed to a better appreciation of the industrial heritage. ICOMOS and TICCIH wish to expand their cooperation by promoting the following Principles to assist in the documentation, protection, conservation and appreciation of industrial heritage as part of the heritage of human societies around the World.

Definition:

The industrial heritage consists of sites, structures, complexes, areas and landscapes as well as the related machinery, objects or documents that provide evidence of past or ongoing industrial processes of production, the extraction of raw materials, their transformation into goods, and the related energy and transport infrastructures. Industrial heritage reflects the profound connection between the cultural and natural environment, as industrial processes – whether ancient or modern – depend on natural sources of raw materials, energy and transportation networks to produce and distribute products to broader markets. It includes both material assets – immovable and movable – , and intangible dimensions such as technical know how, the organisation of work and workers, and the complex social and cultural legacy that shaped the life of communities and brought major organizational changes to entire societies and the world in general. Industrial heritage sites are much diversified in terms of their purpose, design and evolution over time.

I Document and understand industrial heritage structures, sites, areas and landscapes and their values

Researching and documenting industrial structures, sites, landscapes and the related machinery, equipment, records or intangible aspects is essential to their identification, conservation, and the appreciation of their heritage significance and value. Human skills and knowledge involved in old industrial processes are a critically important resource in conservation.

Researching and documenting industrial heritage sites and structures must address their historical, technological and socio economic dimensions to provide an integrated base for conservation and management.

Thorough knowledge of the industrial and socioeconomic history of an area or country or

their links to other parts of the world is necessary to understand the significance of industrial heritage sites or structures.

II Ensure effective protection and conservation of the industrial heritage structures, sites, areas and landscapes

Appropriate policies, legal and administrative measures need to be adopted and adequately implemented to protect and ensure the conservation of industrial heritage sites and structures, including their machinery and records.

Integrated inventories and lists of structures, sites, areas, landscapes their setting and associated objects, documents, drawings and archives or intangible heritage should be developed and used as part of these effective management and conservation policies and protection measures.

In the case of active industrial structures or sites of heritage significance, it must be recognized that their continued use and function might carry some of their heritage significance

Protection measures should apply to buildings and their contents since completeness or functional integrity is especially important to the significance of industrial heritage structures and sites.

III Conserve and maintain the industrial heritage structures, sites, areas and landscapes

Appropriate original or alternative and adaptive use is the most frequent way and often the most sustainable way of ensuring the conservation of industrial heritage sites or structures. New uses should respect significant material, components and patterns of circulation and activity.

Wherever possible, physical interventions should be reversible, and respect the age value and significant traces or marks. Changes should be documented.

In case of prospective redundancy, decommissioning, and / or adaptation of industrial heritage sites or structures, the processes should be recorded including, for example, where components have to be demolished and machinery has to be removed.

IV Present and communicate the heritage dimensions and values of industrial structures, sites, areas and landscapes to raise public and corporate awareness, and support training and research

Programmes and facilities such as visits of active industrial heritage sites and the presentation of their operations as well as the stories and intangible heritage associated with their history, should be implemented

E-FAITH in Antwerp

At the latest weekend meeting of E-FAITH in June (attended for the AIA by Mark Watson), the main topic for discussion was the apparent (to some) decline of civil society in the face of austerity, rather than any filling of the gaps by voluntary groups given impetus by 2015 European Year of Industrial and Technical Heritage. Organiser Adriaan Linters gave participants insight from his job in the 1970s, listing buildings in the docklands, when the few other people around were long-distance lorry drivers, and warehouses could be bought for almost nothing compared to the high values they now have, thanks to a turn-around in perceptions of dockland heritage.

The meeting was held in the Zuiderpershuis which is a hydraulic pumping station of 1883 now used for cultural purposes. Antwerp is a very good example of an active port that is proud of its maritime past. St Felix warehouse for example contains restaurants and the city archives, while retaining hydraulic jiggers served by its own accumulator tower. There is an important collection of cranes managed by MAS. The river wharves are lined with steel-framed warehouses, some retaining quarantine pens for animals. The pilot house is expected to become a hotel. Another converted warehouse, the FoMu photography museum, is at risk due to local government reorganisation removing a county tier. Visitors may also go underground by means of a pedestrian tunnel with wooden escalators, or by tours of the sewers -wellies provided!



St Felix Warehouse jigger



St Felix warehouse courtyard



Zuiderpershuis hydraulic pumping station

all photos Mark Watson

Arson attacks at Herdmans Mill

Two fires at the disused factory in County Tyrone in June are being treated by police as arson. The first fire was started at Herdman's Mill in Sion Mills on Friday 10 June and caused 'substantial damage', police said. The second a day later caused further damage. The mill was previously targeted by arsonists in October 2015.

The mill, which once employed more than 1,000 staff and was described as the 'Rolls Royce' of the linen industry, ceased spinning in 2004 in the face of competition from China and the company that owned the mill went into receivership in 2011. In 2014 it was bought by a local lottery winner who planned to restore the buildings which are listed B+ and convert them to new uses.

Previously a Donegal based firm had wanted to build an anaerobic digester on the site to process waste and generate electricity but this was strongly opposed by local residents.

It is claimed that the old mill, built in 1835 by the Herdman brothers, is the earliest fireproof mill in Ireland. The site continued to be developed until about 1888. Powered by the River Mourne, turbines were installed in 1900 to replace the original four wheels. The 14-foot head produced up to 1000hp.



Herdmans Mill

photo Kenneth Allen

The Herdmans' vision was to create a moral, God-fearing, temperate, educated, non-sectarian community around a flax-spinning business in the northwest of Ireland which was a prolific flax-growing area. They built a model village, a school,

churches, recreational and sporting facilities and succeeding in creating a community where everyone, of both religious traditions, lived and worked together for 170 years.

HLF Industrial Maritime & Transport Group Meeting, Boathouse No4 Portsmouth Dockyard

The AIA is a key member of the HLF Industrial Maritime & Transport Group which meets every six months to share information and advice about the industrial heritage sector. The group meets in locations which have benefited from HLF funding and Boathouse No 4 was the venue for this June's meeting. The building and its present use could not have been a more appropriate for the IM&TG.

No. 4 Boathouse is a product of the rapid re-armament in the late 1930s, and a rare example of an interwar heavy engineering shop. It was designed for the maintenance and fitting out of small boats up to 40 tons, and constructed of reinforced concrete with a riveted steel frame, a saw tooth roof profile and facades designed with reference to contemporary American factories. Construction of the building stopped as the Second World War began, and a corrugated iron wall was hastily constructed at the southern end of the building, which otherwise would have stretched as far as Victory Gate. This 'temporary' corrugated wall remains today.

The building was saved from demolition a few years ago after a campaign by Save Britain's Heritage and has now been restored and converted into a Boatbuilding Skills Training Centre home to the International Boatbuilding College Portsmouth and Highbury College. These two colleges train a new generation of students in the techniques of traditional boatbuilding and other related skills that are still very much required today to build and conserve wooden boats. On a mezzanine floor The Forgotten Craft exhibition tells the story of small boats in the British Navy, including a display of several small craft. The exhibition overlooks the main workshop, so visitors can watch real boatbuilding in action. This level also contains a classroom and a restaurant and bar with magnificent views out over the HMS Warrior and the Solent.

The IM&TG meetings are organised by an HLF team which now consists of Adam Tyson – the point of contact for IM&T matters, Mike Buckley the Team Support Officer and Sara Croft the new HLF Head of Historic Environment and receives

reports from its constituent members. The AIA reported on the All Parliamentary Party Group on Industrial Heritage which the Association currently convenes and also reported its continuing concerns over various preserved sites including the lamentable demolition of Snibston Discovery Centre, the threat of closure of the two

were mulled over, Hannah Cuncliffe's update of the Shipshape Training Project a HLF funded Skills for the Future programme while common concerns over viability of preserved sites and heritage practices were expressed by ABTEM and the Heritage Railway Association.

The HLF team provided an internal update.



Boathouse No4 Portsmouth dockyard

photo Keith Faulkner

Lancashire Mill Museums and the inappropriate planning proposals for Waltham Abbey Gunpowder Mills. On a brighter note the AIA was able to report its Practical Day on Advocacy and the production of the resulting CBA Resources Sheet which would be of great value to organisations seeking advice on sustainability.

Other contributions included Henry Cleary's, (Director of the Maritime Heritage Trust) update on the Reconnections Conference in Liverpool last October and the follow-up seminar in April at which the lessons resulting from the conference

There was to be a third round of the **Skills for the Future** programme and details of the **Resilience and Heritage Endowment** programmes would be announced at the end of July. The current Strategic Plan was to be extended to 2018 to allow Ros Kerslake, the new Chief executive to bed in and as well as the new Chairman of Trustees. It was noted that Sir Neil Cossons had recently been appointed a HLF Trustee.

Keith Faulkner

Award for Millend Mill, Eastington, Gloucestershire

On the 1 June AIA Chairman Keith Falconer and Amber Patrick, the co-ordinator of the Best Creative Re-use of an Industrial Building Award scheme, presented a plaque to the team that saved Millend Mill, Eastington from dereliction and turned it into eleven apartments with a new waterwheel providing some of the energy.

Millend Mill was one of the many textile mills in the Stroud area which went out of textile manufacturing and, although subsequently used for other purposes, was desperately in need of a new use by the end of the twentieth century. Had the current owners/architect/builders not taken on and completed the work on this site, the mill might have been lost.

The original and main mill was constructed in 1818 as a water powered textile mill. A Boulton and Watt engine was installed by Henry Hicks around 1821.

The mill also had a variety of uses over the years, perhaps the most notable of which was as a mechanical maltings which resulted in the addition of a double floored kiln on the corner of the site. There was a major fire in 1922 and malt production later ceased, but other uses were made of the buildings until the late 1980s after which it stood empty. As part of the 2009 scheme to redevelop the mill all the later additions were to be demolished and work on recording of the standing building was undertaken by Stephen

Mills a member of GSIA and a noted expert on the textile mills of the Stroud area.

The high quality conversion of the main mill by Grantbourne Ltd, owned by Robert Lamplough, witnessed the careful reinstatement of masonry features obscured or lost in the later twentieth century developments and the reinstatement of an elm waterwheel capable of generating several kilowatts of power. The architect responsible for the Millend project was Didier Ryan of Undercurrent Architects, specialists in creative regeneration projects, and construction work was by local builder Bob Brewer of Bob Brewer Ltd. In total more than £2 million was invested in the mill's regeneration.

Genius Loci

Genius Loci is an EU funded project and is an initiative resulting from the 2015 European Industrial and Technical Heritage Year.

Its purpose is to draw attention to the heritage of small-scale industrial enterprises, to (re)evaluate their heritage significance and to increase understanding and appreciation by tourists and the general public.

Project partners are based in Italy, Spain, Hungary, Malta and Belgium, while E-FAITH is offering its expertise and network to the project.

The following sectors have been identified as priorities for the first phase of the project:

- the traditional fermented drinks industry (beer, wine, cider,...) and the process of distilling strong spirits from these;
- clay processing industries (bricks, tiles, roof tiles – but also refractory bricks, pottery, drainage pipes, majolica,...);
- traditional textile crafts including weaving and the production of traditional European textile fibres (eg flax, hemp).

The sites and museums that are included in the Genius Loci project will all receive a free INDUSTRIANA label.

To be included, one must download and complete the questionnaire from the INDUSTRIANA website. The labels will be allotted from mid-September and sent to the addresses of the sites or museums who have completed the questionnaire and who have been selected.

There will be between 100 and 150 labels attributed in a first phase.

INDUSTRIANA

INDUSTRIANA is a community of European industrial and technical heritage sites and museums and their visitors which aims to promote them and establish contacts between them.

It is an initiative launched with the support and under the patronage of E-FAITH, the European Federation of Associations of Industrial and Technical Heritage – as one of the permanent results of the *2015 European Industrial and Technical Heritage Year*.

By applying the official European Industrial Heritage Shield to the facade of an industrial heritage site, conservation area, industrial building, museum, villages or at the secretariat address of an industrial heritage organisation, you can show that you are part of a European movement that puts the preservation and presentation of industrial and technical heritage on the European agenda.

If you are interested in receiving an INDUSTRIANA label contact E-FAITH

In the member states of the European Union and the member states of the Council of Europe there are thousands, even hundreds of thousands, of sites and places that bear witness to the European industrial past and traditions. They all are eligible to acquire and use the

INDUSTRIANA facade label to announce and promote their existence and to inform the passer-by about their history and backgrounds. Places where one can visit a steam engine or the remains of a coalmine, the humble places where the traditions of an old technique or craft still live, the more recent industrial plants, windmills and power stations...each site has something to tell to passers-by, tourists and local residents. Each site that would like to tell its story, and the role it played in the past, but also its value for today and tomorrow.

They can be:

- Ruins or remains of an industrial building, even the places where little is seen on the surface but where archaeological traces remain below ground level;
- museums presenting the history of industry, science and technology (ranging from a brewery museum, a textile museum, the museums of local industry, maritime, railway and transport history museums;
- traditional and 'museum' workshops, producing traditional products using ancient techniques, as an old weaving workshop where traditional cloth is produced on an old loom, the workshop of a maker of wooden shoes or baskets, a paper maker, a smithy or a foundry;
- the traces, bridges and viaducts of an old railway line which may have been turned into a footpath or a bicycle trail, its derelict railway stations or signal boxes,...or which is now used as a tourist railway where old trains are running;
- industrial buildings that have been re-used: a textile mill or a warehouse changed to apartments, a brewery that has become a cultural or exhibition centre, an old hangar now a sports centre;
- sites that are landmarks in their neighbourhood such as a blast furnace, a water tower, a harbour crane or the chimney of a demolished textile mill;

What are the advantages of having and applying the facade label?

- You show clearly that you are committed to the preservation and presentation of your industrial and technical heritage and the site itself;
- you are on the map of all the industrial heritage locations over Europe – giving a unique overview of what exists in the different domains and in your region;
- you will attract attention and visitors, according to their interest, not only people from the region but from all over Europe;

and last but not least... you promote and support the European industrial and technical heritage. You support the movement and the commitment of so many volunteers and associations campaigning in favour of the safeguarding and interpretation of it !!!

Nominations for honours

The Department for Culture, Media and Sport considers nominations for candidates whose activities fall within its remit, i.e. sports, the creative industries, including fashion design and advertising, art, music, film, museums, tourism and hospitality, libraries, heritage, archaeology, broadcasting and radio.

Nominees should be those people who have made a difference in their field of work or community – people who have gone that extra mile. Nominated individuals are considered by a number of independent advisory committees who decide upon a final list that goes forward to the Prime Minister.

By the time this edition of *IA News* is distributed it will be too late to nominate even for next year's Queens Birthday Honours and the deadline for the 2018 New Year's Honours will be next April, so if you wish to put forward any worthy candidate it is not too early to be thinking and planning to do so.

The industrial archaeology world has been poorly represented recently – though with notable exceptions.

Must Farm dig ends

The ten month dig at Must Farm near Peterborough which has revealed, perhaps, more about bronze age life in Britain than we have ever known, has come to an end and work begins on the detailed study of the amazing collection of artefacts recovered. From an IA point of view the most significant find was a complete wheel, a metre in diameter, made of oak planks with its hub intact, which was uncovered in February.



Bronze age wheel excavated at Must Farm

From an industrial angle this might be challenged by a find in the last week of the dig when Susanna Harris, an ancient textiles expert from Glasgow University, studying an unprepossessing bundle of blackened fibres, found a reel of thread spun from plant fibre, finer than a human hair and what about the woven linen described as finer than the lightest of today's fabrics,

The value of community generated research

Historic England set up an enquiry to assess:

The amount of historic environment research being undertaken by community groups and the potential scholarly value of this research in enhancing other resources, in particular those used to support the planning system.

The results highlighted the extraordinary volume of brilliant work undertaken by voluntary researchers and community groups. It also raised a number of issues about the degree to which such work is given the attention and prominence it deserves; recommendations for how the situation could be improved were outlined in the report which was written by Rob Hedge, Community Project Officer and Aisling Nash, Historic Environment Advisor, Archive and Archaeology Service, Worcestershire County Council.

Conclusion 1

Voluntary and community historic environment research over the past five years has covered a vast range of topics and investigative techniques. It is estimated to be in the region of 12,000 projects and a total of over 20,000 discrete research outputs. The difficulties in accurately quantifying such research, which is not systematically collated, mean that this is likely to be a very conservative estimate.

The research generated has significant value and largely untapped potential to enhance research resources and HERs (Historic Environment Records), which could have a positive impact on the sector's ability to manage and protect the historic environment.

Recommendations

Historic environment professionals need to take this into consideration in developing and enhancing research resources. Community-generated research is frequently seen in terms of the outcomes and the value of the process, but all too often the research value of the outputs has not been recognised.

Conclusion 2

Dissemination of research is currently haphazard and largely contingent upon the focus of the researchers, existing networks of contact, and the funding of the project.

Local history groups are far less likely than those with a focus on archaeology to send research to HERs.

Recommendations

The sector urgently needs to examine how the wide range of outputs generated by voluntary sector research can best be captured and incorporated into historic environment research resources in a systematic and efficient manner.

Conclusion 3

The local history sector is largely disassociated from the process of creating and updating historic environment research resources. Relations between parts of the historic environment sector are at times unequal and unsatisfactory, with too little appreciation for the value of others' roles.

Recommendations:

Closer links should be encouraged between different services and bodies that are recipients of historic environment research, including but not limited to HERs, Record Offices/Archives, local studies libraries and national heritage bodies, County-level working groups or forums to discuss and share information on voluntary and community-generated research received and in progress would help to disseminate information and help to prevent duplication of effort and the problem of information silos.

Conclusion 4:

Awareness of research frameworks is currently low in the voluntary and community sector. Efforts to improve accessibility and promotion are essential if wider use and more inclusive development of research frameworks is to be achieved.

Industrial Explorer Weekend Around Oxford Cars, marmalade, blankets and more

22 – 25 September 2016

Led by Sue Constable.

Oxford has been described as 'a city of dreaming spires' dedicated to the pursuit of learning and it certainly took its time catching up with the industrial revolution. As late as 1850 there was little sign of industry, mostly the city was one of small tradesmen, shopkeepers and servants heavily dependent on the University.

But towards the end of the nineteenth century there was demand for gas, electricity, clean water and consumer goods while a variety of industries appeared throughout the city.

The seeds of Oxford's most famous industry, the motor car, were not sown until 1912 but after WW1 manufacturing developed rapidly at Cowley turning Oxford into a major industrial centre.

Industry started earlier in nearby Abingdon and Witney and the three towns together make a fascinating study.

The tour will begin on the Thursday evening and will finish mid afternoon on Sunday.

We will be staying in Abingdon and will travel out from there on foot to local sites and in a comfortable mini-coach to sites in the surrounding area.

If you are interested in joining the tour on a non-residential basis please contact us for further information: bill@heritageofindustry.co.uk

The cost of the tour is including 3 nights bed & breakfast, transport etc is £430 per person sharing, single supplement £140.

Help to protect listed buildings

Stopping the Rot is a new guide from Historic England that provides information designed to help local authorities protect privately owned listed buildings.

While the owners of listed buildings are not under statutory obligation to maintain their property in a good state of repair, it is in their interests to do so. Equally, if it becomes evident that a listed building is deteriorating, or being allowed to deteriorate, local authorities can take action to ensure repair work is done.

There are a number of options for local authorities to help them take action including Urgent Works Notices, Repairs Notices and Section 215 Notices. This guide provides an outline of these, step-by-step advice on the use of the main procedures, case studies, and a selection of specimen letters, notices, schedules and agreements.

ERIH

Annual Conference

26 to 29 October 2016 | Porto, Portugal

European Industrial Heritage – How to tell the International Story

From its beginnings, the Industrial Revolution was not just a British phenomenon, it was international – "globalization" is not a new buzz word! The new technologies quickly spread across the world, particularly in Europe, and this marked a major turning point in history. Almost every aspect of daily life was affected in some way and, as a result, there were strong similarities across countries and cultures in the methods of production and ways of life – we all dug the same coal.

Each industrial heritage site, every city; and each worker's dwelling has an international dimension to its history and this provides a huge treasure trove of fascinating stories which can be presented in ways that appeal to people of all ages and backgrounds.

Do we do this? Unfortunately not. Our presentations mainly focus solely on the local history and rarely touch on the wider, European story.

Should we change this? Yes, we should. Telling the story of a site's international links and relevance is a great opportunity to widen the site's appeal and to attract new visitors and repeat visitors. New stories for new visitors!

For details of the conference and booking form go to the ERIH website.

Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review*.

- Bristol Industrial Archaeological Society Journal*, 48, 2015
- Dorset Industrial Archaeology Society Bulletin*, 45, May 2016
- Histelec News: Newsletter of the South Western Electricity Historical Society*, 62, April 2016
- Hampshire Industrial Archaeology Society Focus on Industrial Archaeology*, 86, June 2016
- Greater London Industrial Archaeology Society Newsletter*, 283, April 2016; 284, June 2016
- Hampshire Industrial Archaeology Society Journal*, 24, 2016
- Historic Gas Times*, 87, June 2016
- ICE Panel for Historical Engineering Works Newsletter*, 149, March 2016
- London's Industrial Archaeology*, 14, 2014
- Midland Wind and Watermills Group Newsletter*, 114, April 2016
- Norfolk Industrial Archaeology Society Newsletter*, March 2016
- North East Derbyshire Industrial Archaeology Society Newsletter*, 62, May 2016
- Northamptonshire Industrial Archaeology Group Newsletter*, 138, Spring 2016
- Northern Mine Research Society Newsletter*, May 2016
- Piers: the Journal of the National Piers Society*, 119, Spring 2016
- Scottish Industrial Heritage Society Bulletin*, 78, March 2016; 79, June 2016
- Somerset Industrial Archaeological Society Bulletin*, 131, April 2016
- South West Wales Industrial Archaeology Society Bulletin*, 126, June 2016
- Surrey Industrial History Group Newsletter*, 210, May 2016
- Sussex Industrial Archaeology Society Newsletter*, 170, April 2016
- Sussex Mills Group Newsletter*, 170, April 2016
- Trevithick Society Newsletter*, 171, Spring 2016
- WaterWords: News from the Waterworks Museum, Hereford*, Spring 2016
- Welsh Mines Society Newsletter*, 74, Spring 2016
- Yorkshire Archaeological Society Industrial History Section Newsletter*, 97, Late Spring 2016



Plenty of water at the mill at Ohaba Romania

photo Bill Barksfield

Books

Early Main Line Railways edited by Peter Cross-Rudkin, Six Martlets Publishing, 4 Market Hill, Clare, CO10 8NN. ISBN, 308pp, 94 illus, colour.

Eighteen learned papers and an introduction presented at the first Early Main Line Railways Conference held at Caernarfon in June 2014. They cover subjects related to economic, political, social and cultural progress, and to business incentive and practice, as well as developments in structural, architectural and building techniques and practice, and material progress. Although the main focus is on railways in the British Isles there are also articles concerning railways in Egypt, India, Columbia, Argentina and North America. The period covered runs from 1830 with the opening of the Liverpool and Manchester railway up to about 1870 by which time it was considered that the main parameters of the railway system had been established.



Taking water at Parkside from coloured views on the Liverpool and Manchester Railway by R Ackermann 1831

Isambard Kingdom Brunel: The Life of an Engineering Genius, by Colin Maggs, Amberley Publishing, The Hill Stroud, GL5 4EP, 2016, ISBN 978 1 4456 4065 5, 309pp, 45 illus. £20 hbk.

This full scale biography presents a portrait of a complex, ambitious and determined genius. The Brunel that emerges is not without flaws. He made mistakes, both personal and technical – he wasn't always right but never admitted he was wrong. Drawing on Brunel's diaries, letters and business papers we see the real Brunel, a more human figure, emerging from behind the towering structures and machines he created. An appendix with a selection of his letters is particularly revealing.

West Midlands History, The Great Exhibition 1851, Spring 2016, available from History West Midlands, £10 incl P&P

The West Midlands was central to many facets of the Exhibition. The iconic Crystal Palace which came to symbolise the exhibition was designed by Joseph Paxton, the head gardener at Chatsworth House in Derbyshire, the revolutionary glass came from Chance Brothers and the iron structure from Fox and Henderson - both in Smethwick.

Indeed, the very concept and idea for the Exhibition owed much to the Birmingham Exhibition of Manufacturer and Art which Prince Albert visited on 17th November 1849.

Throughout the Crystal Palace visitors saw the industrial innovation and importance of the West Midlands in exhibits of commodities from Birmingham, the Black Country, Ironbridge and the Potteries, and when they needed refreshment it was provided by the Malvern company of J. Schweppes and Co.

This edition of History West Midlands with fifteen articles on the Exhibition includes a fold out plan, prepared from contemporary records, showing its amazing size and scope.

DIARY

6 September 2016

ERIH IN THE UK

National Mining Museum
Newtongrange nr Edinburgh
j.b.loyd31@gmail.com

6 – 11 September 2016
INTERNATIONAL MINING
HISTORY CONFERENCE

Linares, Spain
www.mining2016linares.com

9 – 14 September 2016
AIA ANNUAL CONFERENCE,
TELFORD

The Association's AGM and annual
conference

9 October 2016
BICENTENARY CELEBRATION
OF THE STIRLING ENGINE

Waterworks Museum Hereford

22 October 2016
AIA PRACTICAL WEEKEND

Iron Furnaces of the Gorge
Details on the AIA website

26 – 29 OCTOBER 2016
ERIH ANNUAL CONFERENCE

Porto, Portugal
See page 22

29 October 2016
ROADS AND TRANSPORT
CONFERENCE

Devizes Town Hall

12 November 2016
EMIAC 91

Christ's Hospital School, Lincoln
Ploughshares into swords

6 May 2017
EMIAC 92

CROMFORD THREADS
North East Derbyshire Industrial
Archaeology Society nedias.co.uk

11 – 13 May 2017
INTERNATIONAL EARLY
ENGINES CONFERENCE

Newcomen and colleagues
achievements untainted by the
smoke screens of Watt
Elsecar, South Yorkshire

25 – 30 August 2017
AIA ANNUAL CONFERENCE,
SOUTH EAST MIDLANDS

Based in Northampton

20 – 22 October 2017
E-FAITH WEEKEND

Barcelona
Further details in IA News 179

22 – 28 June 2018
AIA ANNUAL CONFERENCE,
CAITHNESS

9 – 16 September 2018
TICCIH CONGRESS

Chile Industrial Heritage
Making a Sustainable Future by
Understanding the Past

*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*



AIA tour at the entrance to the Roman workings at Rosia Montana goldmine in Transylvania. Mr Sorin Jurca, vice president of the Rosia Montana Cultural Foundation, explains the history.

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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.