The origins and early days of the AIA

Tom Rolt was elected as the first President of the Association for Industrial Archaeology at the inaugural AGM of the Association in September 1973. On his sadly premature death in May 1974, I took over as President and held the office until 1977. This account in based on my personal memories of these years, and of the circumstances which called the Association into existence.

Angus Buchanan Past-President, AIA

Industrial archaeology was not a completely novel concept in the 1950s, but it emerged in response to the unusual conditions of the years immediately after the Second World War. Before the war there had been a few scattered references to ‘the archaeology of industry’ in historical accounts of the Industrial Revolution, and societies of which the Newcomen Society was the outstanding example had begun to popularise the idea of visiting derelict industrial sites in order to evaluate the significance of their contribution to the development of particular industries and processes. But the war caused profound disruption of European industrial communities as a result of bombing, the loss of markets, and the concentration on arms production, and the process of returning to conditions of comparative normality required adjustment to these novel circumstances. In Britain, this involved the loss of traditional imperial markets, many of which were not easily replaced. Also, much of its transport and heavy industrial infrastructure was worn out, while the capital to renew it was inadequate, so that there was little renovation of such plant until the mid-1950s, by which time industrialists and town planners had come to think in terms of comprehensive redevelopment, sweeping away as much as possible of the old order and starting new developments in their place.

When this stage had been reached a process of rapid destruction of old industrial structures and urban environments began, and public opinion began belatedly to see that many metaphorical babies were being thrown out with the bathwater.

The critical point in the arousing of public consciousness to the serious losses of irreplaceable cultural material was the complete renewal of Euston Station in the late 1950s, and particularly the destruction in 1962 of the Doric Portico which marked the entrance to this, the first main line railway terminus in the world. Many other events in the following years such as Dr Beeching’s Report on railway modernisation helped to maintain a high level of public anxiety, and out of this concern Industrial Archaeology was born. It is to Michael Rix, an extramural lecturer in English Literature at the University of Birmingham, that the first use of the term in its modern sense is generally attributed, in an article in the journal The Amateur Historian in 1955. Then Rix led a series of very successful Field Parties on the subject at Preston Montford in Shropshire, thereby helping to train a first generation of industrial archaeological practitioners. The Council for British Archaeology (CBA), creditably alert to new currents of public opinion, set up a Research Committee on Industrial Archaeology in 1958, under the Chairmanship of Professor WF (Peter) Grimms, the Director of the Institute of Archaeology in the University of London. This secured the appointment of a Survey Officer charged with conducting a survey and compiling a record of industrial monuments. Rex Wailes, a retired mechanical engineer, an expert on windmills, and a Past-President of the Newcomen Society, accepted this post. Another member of the Committee was LTC Rolt, an enthusiastic supporter of canal restoration and the preservation of derelict railways and old vehicles. Kenneth Hudson, a perceptive Industrial Correspondent for the South Western Region of the BBC, was commissioned to write an introductory book, published in 1963 as Industrial Archaeology.

Isle-of-Man Foundation Conference 1973: the Laxey Wheel with Tom Rolt (seated) talking with Douglas Hague

Photo: Angus Buchanan
Messrs Rix, Rolt, Wailes, and Hudson proved to be zealous promoters of industrial archaeology, arousing interest in the subject in many parts of the country. This is where I came in, because having been appointed as an Assistant Lecturer at the Bristol College of Science and Technology on it becoming a 'College of Advanced Technology' (CAT) in 1960, I joined the new General Studies Department and was made responsible for teaching classes of engineers and applied scientists some social and industrial history. Searching for a way of bridging the perceived gap between the 'Two Cultures' which had recently been established in the public mind by CP Snow, I identified a way of doing this through the history of technology and with the support of the College, the 'Centre for the Study of the History of Technology' was set up in 1964. Fifty years later, in 2014, this small research unit still functions under my direction as the 'History of Technology Research Unit' (HOTRU). The Centre was originally supported by an Advisory Council of experts under the chairmanship of Sir Arthur Elton, an industrial film maker and an enthusiast for the history of technology, who had contributed a chapter on the Gas Industry to the Oxford University Press five-volume series on The History of Technology (1954). Amongst other members of the Advisory Council were Tom Rolt, Rex Wailes, Michael Rix, Kenneth Hudson and Neil Cossons.

I had invited Alan Warhurst, the far-sighted Director of Bristol City Museums, to join the Council of the Centre, but in declining this commitment he strongly recommended that I approach Neil Cossons, whom he had just appointed as his first Curator of Technology. I did so, and he accepted, and so began a decade of vigorous creative cooperation between Neil and myself. Encouraged by the local interest in the burgeoning subject of industrial archaeology, we established an extramural class in the subject which ran for three years, and such was its popularity that we then converted it into a society – the Bristol Industrial Archaeological Society (BIAS), founded in 1967. In addition to a continuing series of extramural lectures, we arranged an exciting series of visits, both within the Bristol and Bath region which we defined as the principal area of interest of the Society, and beyond to Ironbridge and South Wales. We also set up an annual BIAS Journal which was first issued in 1968 and has come out regularly ever since, and fired by enthusiasm for the new series of local studies of industrial archaeology being published by David & Charles of Newton Abbot, Neil and I offered to write a volume on The Industrial Archaeology of the Bristol Region, which was published in 1969 and followed by Bristol: Industrial History in Pictures in 1970.

It was an exciting decade of collaborative effort, with several important by-products, the first of which was a series of annual conferences that I organised at the CAT, which became the University of Bath in 1966. These Bath Conferences were held from 1964, with two preliminary day-long meetings, followed by five week-end conferences to 1970. The pattern of these weekends was to assemble on the Friday evening with a lecture after the dinner, and then to have Saturday morning on working sessions, followed by an outing to sites of industrial interest in the afternoon and then another evening lecture. The Sunday morning was devoted to a general discussion on industrial archaeology and our future plans to promote the subject, before dispersing after lunch. The conferences acquired a regular clientele of fifty to sixty people from all over the country and from abroad, in the persons of Robert Vogel and Marie Nisser, from the United States and Sweden respectively. They usually had a fairly general theme, such as The Theory and Practice of Industrial Archaeology in 1967, which encouraged a wide-ranging discussion. One in 1969, however, was a Symposium on the Lead Industry, which made particularly good use of the excellent physical evidence of the Mendip industry. By 1970 we felt that we had sampled the best of the easily available industrial archaeological material in the Bristol region, and our supporters had acquired sufficient camaraderie to wish to carry on with the meetings, so we decided that the Bath Conferences had to become peripatetic. This we achieved in 1971 by meeting in Bradford, and in Glasgow in 1972. It was at the Glasgow conference that Sir Arthur Elton brought an intense discussion to a close by moving a formal motion that at our next conference we should form ourselves into a national association. The resolution was carried.

However obvious this decision may appear in retrospect, it was by no means so clear at the time because the great local interest in industrial archaeology had already promoted the formation of many IA societies during the 1960s – the
Arthur Elton had sadly died in the year since the Glasgow meeting, and Tom Rolt was unanimously elected as the first President of the AIA. A Council was elected, with myself as Vice President and Neil as Secretary. Thus equipped, the Council set out to determine the details of the constitution and to work out other aspects of the organisation. Thanks to the good offices of Michael Rix, we got permission to use the Archives room in Birmingham Central Library, which was the most convenient mid-country meeting place for members coming from both Cornwall and Scotland, and several places in between. Unfortunately, the infant Association lost its first President with the tragically premature death of Tom Rolt in May 1974, and in this crisis I took over as President and served in the office until 1977, so that the conferences at Keele (1974), Durham (1975), Southampton (1976) and Manchester (1977) were under my presidency.

At the Manchester conference we took the step of acquiring company status to iron out some irregularities in our constitution, which required the peculiar manoeuvre of everybody leaving the room during the AGM and rejoining the organisation in its new role as we re-entered. Ever since, the AIA has operated as a charitable company with limited liability under Company Law requirements. By this time we had already arranged for the transfer of the journal *Industrial Archaeology* from David & Charles, who had acquired it from Lambarde Press, the original publisher, in 1965, to Oxford University Press, with the AIA retaining editorial control. This proved to be an uncomfortable arrangement for various reasons, and it was a relief to both parties when the Association agreed to take full responsibility for it as the *Industrial Archaeological Review*. Kenneth Hudson had passed on the editorship to Professor John Butt of Strathclyde University in 1969, and the role passed to Stafford Linsley in 1978. Stafford was at the University of Newcastle, where he was responsible for some very successful extramural courses, and in 1984 he handed on the editorship to Marilyn Palmer and Peter Neaverson, who ran an efficient partnership until Peter’s death in 2005. The Review is now published for the Association by Maney’s, and has acted as an impressive public figurehead for the AIA under its series of Editors.

Another major activity of the AIA has been the institution of the Rolt Memorial Lecture, which has been an annual feature of the AIA Conference since 1975, when Professor AW Skempton of Imperial College London gave the inaugural lecture on ‘Engineers of Sunderland Harbour’. The object of the Rolt Lecture is to speak on a theme of industrial archaeological interest, and this objective has been admirably achieved so that the lecture has become a highlight of the Annual Conference. In 2010, at the Conference in Falmouth, the Rolt Lecture took the form of a Symposium recalling aspects of Tom Rolt’s life and work, being held in the centenary year of his birth.

The Annual Conference, following the precedent of the Bath Conferences, has always been the main event in the activities of the AIA, allowing regular consultations between industrial archaeologists from all parts of the country and beyond. It has thus become an instrument for the expression of a national view on industrial archaeological affairs, and although it has always been careful to avoid partisanship in fulfilling this function it has been able on occasion to give its support to specific conservation initiatives. Generally, however, it has preferred to leave these to be pursued by the flourishing web of local and regional conservation societies which monitor the national industrial heritage and keep it in good health. The Association has matured with its subject matter, because as we move beyond the period of intensive heavy industry into that of information technology and industrial globalisation, the crucial material of industrial archaeology as understood by the pioneers has assumed an increasingly archaic quality. This makes the physical remains of old industrial and transport systems assume ever greater historical and archival value, even though the need for urgent conservation activity has been diminished by the passage of time. We who were involved in the early years of IA may regret the passing of the high expectations, intense enthusiasms, and a high level of familial and communal participation, in our care for industrial monuments, but we have nevertheless much to be grateful for in the continuing attention given to these heritage monuments by the AIA and other industrial archaeological organisations.
Grytviken, South Georgia Island

Funded by the South Georgia Heritage Trust and the Association for Industrial Archaeology’s Peter Neaverson Student Travel Bursary, Scott L Smith visited South Georgia to conduct research in connection with his PhD in cultural heritage computer visualisation at the University of Dundee, focussing on the abandoned industrial shore whaling stations of the island that were in operation from 1904-1965. The Government of South Georgia and the South Sandwich Islands provided additional support during the expedition.

Scott L Smith

South Georgia is a unique environment in the southern Atlantic Ocean; it is at the point of the Antarctic convergence, where very cold waters meet more temperate ones. The island provides shelter and breeding grounds for abundant wildlife, and the presence of krill in the surrounding waters sustains many different types of life in the region. This has made the area an important world fishery (including seals and whales) since the early days of the nineteenth century.

South Georgia and the South Sandwich Islands (SGSSI) is a British overseas territory established in 1985; prior to this the islands were politically a part of the Falkland Islands Dependencies. Captain James Cook was the first to circumnavigate South Georgia Island in 1775 and made the first landing, claiming it for the 'Kingdom of Great Britain' and naming it the 'Isle of Georgia' in honour of King George III. It was later renamed South Georgia. The British Antarctic Survey (BAS) operates a few bases on the island, the largest at King Edward Point (KEP), which is around the cove from Grytviken, where I was based during the trip. Grytviken was the first established South Georgia whaling shore station in 1904 and it was also the longest in operation there – not closing until 1964. Habitation is possible at Grytviken owing to asbestos removal and clean-up operations undertaken in 2003/04.

During the early twentieth century whales become scarce in northern waters as a result of improvements in technology and hunting methods in the late 1800s. There was a global demand for whale oil and whaling grounds were expanded to include the Antarctic (see The Shore Whaling Stations at South Georgia by Bjorn Basberg for more information).

At South Georgia, the whale carcasses were towed ashore and processed by modern industrial methods. By 1964, when whaling ended there, British legislation required the whaling stations to use as much of the carcass as possible for oil and other products, to avoid the waste that earlier blubber-only processing had caused. The oil was extracted not only from the blubber but also from the meat and bones of the whale. These sources all required different methods of cooking, extraction and processing. This resulted in different qualities of whale oil for a range of applications from foodstuffs (most margarine in the early 1960s contained whale oil), pharmaceuticals, cosmetics, industrial lubricant, chemical products to the production of nitroglycerine. The meat residue left after oil extraction, was further refined into an additive for stock food. Oil extracted bones were ground for fertiliser and stock food additive, so-called ‘guano’. Later efforts were made to freeze fresh whale meat for human consumption and also for the production of meat extract.

When I arrived at Grytviken, I was accommodated in a renovated whaling foreman’s residence called Drukken Villa. My main occupation during the initial stage of my stay was to complete a thorough photographic survey of the Grytviken whaling station, for use in creation of a computer visualisation artefact (and also to record the current state of the site). A low-resolution video of some of this footage can be viewed at http://vimeo.com/88205040. The full resolution stills are currently being processed as part of my research.

The physical remains of the whaling stations in South Georgia exist in unprecedented quantity and quality, owing to the nature of the suspension of whaling in the region, which many thought would resume after a few seasons. Equipment and structures were abandoned on an overwhelming scale and a complexity of industrial remains left in situ. This, combined with the limited visitors and inhabitants of the remote location, has led to a remarkable repository of this vanished industry. There has been some unfortunate vandalism and removal of artefacts over the years, but there is now a much better understanding of the site’s archeological and cultural value, rather than regarding it just as scrap. The station remains have been formally transferred to the Government of SGSSI from the various companies that once owned the equipment.

As my stay progressed, various cruise ships called at KEP and I was able to survey many of these visitors about their impressions of the industrial history of the site and industry and their thoughts on the technology and art of computer visualisation in relation to the sites.

In January, Professor Bjorn Basberg arrived on South Georgia and he was able to guide me through the remains at Grytviken as well as organise a side expedition for us to visit the whaling station remains at Husvik and Leith stations. As these sites are deteriorating in structure and contain asbestos, safety protocols were followed to comply with government permits obtained for entry.

The visit to South Georgia was invaluable for me in the first year of my PhD studies. I now feel my task would have been almost impossible without the benefit of a field visit. I feel very fortunate to have been able to experience the sites first-hand and thank the AIA for helping to make this possible. I now look forward to continuing my research into Grytviken and South Georgia, exploring the issues and contributions of practical computer visualisation work in cultural heritage and industrial archaeology.

A view of Husvik whaling station

Photo: Scott L Smith
Forth Bridge nomination for World Heritage listing

Supposing that there were six Eiffel Towers laid horizontally in a row, base to base and top to top. If you then painted them red and skewered through two railway lines from either end, you would have something of the scale, though not the elegance and visual impact of the Forth Bridge.

Mark Watson, Historic Scotland

Perhaps that thought ran through the mind of Gustave Eiffel, honoured guest at the opening of the bridge in 1890. But one-upmanship probably took second place to general excitement among engineers in the 1880s that their profession had come of age.

International comparison is a delicate tightrope for the writer of a world heritage nomination, which the UK and Scottish governments had resolved to submit. The text had to define outstanding universal value compared to other structures of its type, while at the same time supporting and putting into perspective the value of those other bridges. The nomination sets out this statement of outstanding universal value and posits three of the criteria set by UNESCO:

‘The Forth Bridge is a triumph of engineering. The first monumental-scale steel bridge, in most respects it has never been surpassed. When opened in 1890 it had both the longest and the second longest spans in the world. No other trussed bridge approaches that perfect balance of structural elegance and strength, nor its overall size. Superlative in its application of novel steel technologies, the Forth Bridge used and influenced engineering know-how that had become international in scope. It is a globally-important triumph of design, at once structural and aesthetic. Still performing as a vital UK transport artery, this icon of Scotland perfectly encapsulates 19th century belief in mankind’s ultimate ability to overcome any obstacle: the impossible could indeed be made possible.’

Enderby Wharf
London – At risk

On the south bank of the Thames in Greenwich northeast of the historic town centre, the Enderby Wharf site is the cradle of the world’s communication revolution, on a par with the Ironbridge Gorge, cradle of the industrial revolution, and comparable with Bletchley Park.

Robert Carr

In the eighteenth century there was a gunpowder store here and later a depot for a major whaling company whose ships also undertook exploration. From 1857 submarine telegraph cables were manufactured on the site, these being laid on routes such as Corsica–Sardinia, Lowestoft–Zandvoort, Malta–Alexandria and Sicily–Algeria. In the mid 1860s the successful transatlantic cables laid by the SS Great Eastern were made here and many more followed. Up to at least the 1960s, cable ships would lay at Enderby dolphins while submarine cable was made, fed onboard, scrutinized and carefully coiled into their cable tanks in one continuous operation. The manufacture of submarine cable at the wharf ceased about 1979. Some of the cable loading gear survives on the riverside.

The telegraph revolution of the mid-Victorian period radically changed stock market speculation, business in general, the way the Empire was administered and international politics. For a time it was even hoped that war itself would become a thing of the past. Governments could now communicate so rapidly, misunderstandings and difficulties would be resolved by negotiation before more drastic action was undertaken; cannon would only be seen in museums as relics of a barbarous past. It is further claimed by Tom Standage in his thought-provoking book The Victorian Internet that compared with the present-day Internet the electric telegraph was the more significant, since the ability to communicate globally at all in real-time was a qualitative shift, while the change brought about by the modern Internet was merely a quantitative shift.

Even now after 157 years, as part of Alcatel-Lucent, innovative submarine communication work is still undertaken at Enderby Wharf and the advanced opto-electronic equipment that is fitted at regular intervals along submarine cables to boost the signal is made here. Nowadays submarine cables are made of Charles Kao’s optical fibre. Kao, a Nobel prizewinner, studied electronic engineering at Woolwich Polytechnic. Contrary to popular belief, most trans-ocean communication does not take place via satellite but along submarine fibre-optic cables.

As a heritage asset Enderby Wharf is as important to Greenwich as the Royal Observatory, and as important to industrial history as Stephenensons Rocket.

The western part of the wharf by the riverside is now being redeveloped. Here we have Enderby House built in the 1830s, listed grade II but in a decrepit state following vandalism. The wharf was first developed by Samuel Enderby & Sons, who were pioneers, engaged in whaling and also exploration. The photograph, taken from the steam tug Portway, shows a view the riverfront from the west in September 2010 before recent demolition work. Enderby House is the small white building with the bay window to the left and the cable loading gear can be seen to the right, surrounded by a flagpole. The late Victorian office building, boarded up, to the right of Enderby House, which had interesting cable decorations around the windows and doorway, has now been demolished. There was a boiler house and chimney further to the south, out of view; these have been demolished quite recently.

The whole Enderby Wharf site is quite large, stretching back from the riverside as far east as Blackwall Lane. The present-day Alcatel-Lucent factory is to the east and they will remain at Enderby’s. It is the intention of the developers to retain and restore Enderby House which is on the English Heritage buildings at risk list, but for much of the site, the part not required by Alcatel-Lucent, Barratt housing is to be built with the first residents due to move there in September 2015. As well as the new homes at Enderby Wharf, there is detailed planning permission for a cruise ship terminal, a 250-room hotel and commercial space.
Warwickshire’s unique ‘gaslight’ distance posts

The Milestone Society is a registered charity dedicated to finding, identifying, recording and conserving what remains of a national network of distance markers once running into hundreds of thousands. Less than 10,000 remain. The design of this series is very unusual.

Mervyn Benford

The industrial revolution brought metal designs to replace many originally made of stone and even wood. A surprisingly wide range of designs were cast iron, some indeed rather splendid. The majority may have been more utilitarian, especially after Highways Boards and later County Councils spent public moneys where previously it had been tolls paid by users. There can be no more dramatic a design, however, than the series of markers along the southern stretch of the original A34 where it entered Warwickshire from Oxfordshire. These resembled gaslights and the series ran from Long Compton to just north of Shipston-on-Stour. The illustration from an old postcard of the marker outside the cinema in Shipston-on-Stour shows exactly how unusual they were. All but the information board remains and the town has very effectively ensured the marker remains in public view and carefully explained.

The Milestone Society works through local branches and the Warwickshire co-ordinator, Michael Buxton, has launched a project, including bids for support, to restore this post and the five others that have somehow survived the ravages of time. The Shipston History Society acquired one, realising its heritage value, and that will be erected in Long Compton village. Another survives, the first mile out of Long Compton, but with one arm damaged, the top missing and again lacking the name-board section. A third was found just a year ago in the hedge, flat on its back, where it had lain for decades undisturbed by undergrowth. This is the biggest threat, after official neglect, to any surviving distance marker.

The help and advice of Warwickshire County Council are welcome and much appreciated as there are always rules and formalities involved in working anywhere on the public highway. Local volunteer help or sponsorship will, of course, be welcome as this often helps to secure matching bids from official grant-making bodies. When completed, Warwickshire will have one of the most remarkable examples of travel heritage to demonstrate just what travel meant in times when everything went more slowly. Each mile completed on often tortuous journeys was welcome relief!

A related aspect of metal markers concerns the casting and the foundries. We believe that these markers were made by Ball Brothers of Stratford-on-Avon, on a site roughly where Tesco stands today. Our society is very keen to use all means to establish how contracts and designs were made, and we would welcome any help from readers in researching such matters in this and other examples. The A49 road though Lancashire has a short series of beautiful cast markers but the Haigh Foundry no longer exists and again access to records would be welcome.

Help, support or comment to: Michael Buxton: mbuxton295@btinternet.com

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All Party Parliamentary Group on Industrial Heritage

This APPG is a new body established to discuss issues concerning industrial heritage. It held its first business meeting at the Houses of Parliament on 25 February and Tony Crosby represented the AIA.

In the absence of the Chairman, David Anderson, the meeting was chaired by one of the Vice-Chairs, Dave Wright MP for Telford. Margaret Faulk from the National Coal Mining Museum at Caphouse Colliery was guiding Dave through the meeting as she is one of the main supporters of this APPG, and had been in contact with Mark Sisson to ensure AIA representation. Following some administrative items on the agenda including future meeting dates, the Chair introduced Sir Neil Cossons who addressed the meeting for about ten minutes. He reiterated many of the arguments with which AIA members will be familiar about the international importance of the UK’s industrial history and heritage; the fact that this heritage is often more appreciated by people from other countries than the British themselves (hence the number of UK World Heritage Sites which are industrial); the situation with the smaller industrial sites in the care of volunteers (as set out in his report to English Heritage); Heritage Lottery Fund support for industrial heritage; and the work of the Industrial Heritage Support Officer, Ian Bapty, who was also at the meeting.

The meeting was then opened for members of the group to speak, and it was well attended by MPs and Peers. Everyone who spoke was very supportive, many coming from traditional constituencies in industrial areas such as Shildon, Middlesbrough, Glasgow, and Bristol. They mentioned such sites as Shildon Railway Museum, the Titan Crane at John Brown’s shipyard in Glasgow, the ironstone museum at Skinningrove and Filton. Kay Andrews, immediate past Chair of English Heritage, was also there and spoke about Middleport Pottery.

The main players in the Group will be meeting to discuss their programme and particularly what are their main issues and agendas and how can they influence Ministers on such issues as regeneration of former industrial areas and sites; how to make the UK’s industrial past relevant to today’s younger generation, including inspiring the next generation of engineers and scientists; and getting pupils out of the classroom and into museums.

Further meetings are scheduled in June, July, October and December.

The Back-to-Back house, a new look?

It is a well-known saying ‘that the more things change the more they stay the same’. How, I wonder, will our modern back-to-backs be regarded 50 or 100 years hence?

John McGuinness

By the end of the Victorian era the back-to-back house had acquired a bad reputation as generating filth, disease, immorality, drunkenness and criminality. A major cause of the incidence of disease was attributed to the lack of cross ventilation. The need for ventilation as a preventative for disease was to be a major requirement of building regulation legislation until the move towards energy conservation became regarded as necessary to secure the future of the planet.

Recently when looking at modern houses for first time buyers in East Berkshire and Outer West London I was surprised to read an estate agents details describing a house probably no more than 20 years old as; ‘this one bedroom back-to-back house which would make a perfect starter home’.

It is clear that an increasing number of the working population at least in the environs of the capital are now living in one or two roomed dwellings, the size of property our Victorian predecessors were keen to eliminate. I have since visited several small estates in the Slough area where there are ranges of recently built two roomed back-to-back houses up to six units long.

So why can a small, poorly ventilated house in the twenty first century not be synonymous with filth and disease when such a property was so conceived half a century before? The answer almost certainly is that the health and other social problems, in times gone by, had nothing to do with ventilation but were the result of overcrowding and lack of maintenance, both to the structure and in the removal of filth and refuse. Couple with this the fact that in 200 years the provision of building services, primarily piped good quality water and efficient sewerage systems, have so completely altered the ability of the occupiers to keep such buildings free of filth.

It would be very interesting to know the nature of house the first occupiers of the early back-to-back houses came from and how they regarded their new home. It is conceivable that many may have been agricultural workers moving out of poorly constructed hovels, for whom the newly built brick house was a very significant improvement.

It is also significant when levelling criticism at the early nineteenth century developments, frequently described as being ‘jerry built’, to note that in many cases their replacements which at the time were highly acclaimed did not last anything like as long before they in turn were condemned. A prime example is the Quarry Hill area of Leeds, where the Victorian back-to-backs were demolished in 1935 and replaced with a vast complex based on the one built in Vienna and designed by Karl Marx Hof. This was built, to great acclaim and interest, over the next few years and was barely complete by the outbreak of the war in 1939. However, by 1953 little more than a decade later, it was being derided by the press with comments such as ‘A slum where mice answer back’. By 1978 it was all gone. This was neither a failure by the building industry, nor of its being a ‘jerry built’ development. It was in fact the result of the inability of social reformers and the architectural profession to understand the needs, desires and aspirations of the lower income family or to design with their wishes and requirements in mind.

Back to backs at Slough

Photo: John McGuinness
Nathaniel Wheeler, pioneering manufacturer

The city of Bridgeport, Connecticut, recently completed restoration of a fountain designed by prominent American sculptor Gutzon Borglum, 1867-1941, (best known for his work on Mount Rushmore) which honours Nathaniel Wheeler, 1820-1893, pioneer in the development of the American system of manufacture using interchangeable parts.

Andrew T. Rose, University of Pittsburgh

Nathaniel Wheeler was a prominent citizen of Bridgeport and a leading industrialist with a worldwide reputation. Wheeler and Allen B. Wilson established Wheeler & Wilson, an early leader in the manufacture of sewing machines, in Watertown, Conn., in 1853. While Wilson provided the technical expertise by contributing four major inventions, Wheeler provided the business skills that resulted in early success. Wheeler was instrumental in forming the Sewing Machine Combination in 1856, through which the four leading sewing machine manufacturers – Howe, Singer, Wheeler & Wilson, and Grover & Baker – formed the first patent pool in U.S. history. The patented inventions of each of the firms were shared among the members, with appropriate license fees paid per machine produced. This allowed the sewing machine industry to grow without the burden of constant litigation over patent infringement. Coincident with the patent pool, Wheeler & Wilson moved the company from Watertown to Bridgeport, beginning production there in 1857 and leading the industry in sales until 1867.

Wheeler & Wilson’s manufacturing processes were initially a melding of the European method of fabricating and fitting up pieces individually by hand and the newer American system where special machine tools were developed to rapidly produce parts of a consistent quality. Wheeler saw the potential expansion of the industry in rapidly increasing consumer demand, and hired key people to transition the company toward mass production. Among them were machinists who had gained experience working at the Springfield Armory and in Samuel Colt’s Hartford Armory. The production of arms for the U.S. government at these armouries led to the development of the American system of manufacturing using machine tools and producing weapons with interchangeable parts. This critical transference of the American system from the public sector to the private moved Wheeler & Wilson’s factory from producing each sewing machine individually to mass production of machines with interchangeable parts.

Wheeler & Wilson’s main competitor throughout the second half of the nineteenth century was Singer. While Wheeler & Wilson quickly adapted to the American system of manufacturing, Singer was slower to embrace the newer process and continued using the slower European method. Singer, however, built a better marketing and distribution system, including developing international markets and offering payment plans to finance consumers’ purchases. Singer’s growth and dominance kept its products at the top of the industry until Singer finally acquired Wheeler & Wilson in 1905. Singer continued manufacturing a number of popular Wheeler & Wilson models in Bridgeport, eventually constructing a new factory there in 1907 that operated until the middle of the twentieth century.

Thanks to the SIA for permission to reproduce this article.
The Atlanterra Project and the development of interpretative animation & international slate studies

The first four months of 2014 saw the culmination of a four year project that examined the valorisation of the mining heritage and laid the foundations for World Heritage Studies of the building-stone and slate industries. It examined the mining heritage from both a geological and archaeological/historical viewpoint and explored how to showcase this heritage using the application of new digital technologies. As a result The Royal Commission recently won the first Peter Neaverson Award for Digital Innovation given by the Association for Industrial Archaeology for its animation of the world’s largest early to mid-nineteenth century copper works – Hafod Copperworks in Swansea.

Stephen Hughes, Projects Director, RCAHMW & TICCIH Secretary

Using material from the Royal Commission on the Ancient & Historical Monuments of Wales (RCAHMW) and their expertise in industrial archaeology together with historic images from the West Glamorgan Record Office and Swansea Museum, the animation recreates the detail of buildings, machinery and processes on the site as well as a sense of the highly industrial nature of the Lower Swansea Valley in the late nineteenth and early twentieth century.

To view this and to follow the numerous other links in this article, go to the AIA website and follow the links there. This cannot be too strongly recommended as some of the effects achieved may amaze you. The website also includes the full text of this article.

The Atlanterra: Green Mines II European Inter-Regional Project was formed in February 2010 by a group of geological, archaeological, tourism and regeneration organisations from France, Spain, Portugal, Ireland and Wales, led by the municipality of Noyant-la-Gravoyère. An understanding of historic mining fields can only be achieved by a determination of their geological structure considered together with their archaeological remains. Consequently, the project partners have included the Instituto Geológico y Minero de España (IGME), the Laboratorio Nacional de Energía e Geologia of Portugal (LNEG) and the Geological Survey of Ireland (GSI). The RCAHMW has led on the archaeological objectives that included the demonstration and diffusion of digital and laser-scanning techniques.

Laser-scanning of a significant site such as that carried out in the Vivian Slate Quarry, part of one of the world’s biggest nineteenth-century mountain terraced slate quarries, at Dinorwig, Llanberis, North Wales. These laser-scans of large industrial landscapes can be used to produce online ‘fly-throughs’ which seem to have an almost magical other-worldly feel that draws new audiences to go and explore these sites for themselves. The Royal Commission also commissioned an equally attractive scan of an underground mine-pumping waterwheel in a lead mine in mid Wales.

This work helped inspire our Atlanterra project partners to produce their own ‘fly-through’ films. One has just been produced by the Copper Coast Geopark in County Waterford in Ireland of the conserved copper mine engine-houses on the cliff at Tarkardstown. Another has a fly-through of the remaining dry underground tunnels and mineral formations in the mine. This includes a 3D digital representation of all the levels, shafts and tunnels ever worked in the mine constructed from the historical mine plans archive held by the Geological Survey of Ireland. The digital and laser surveys have helped produce the high quality results from which animators can build 3D models conveying reliable information to cultural tourists. The Royal Commission’s initial animation of the building of the World Heritage Pontcysyllte Aqueduct in north Wales, produced in 2009 though this lacked a sound track.

Animations of two of the major slate-quarrying and mining sites at Maenofferen Blaenau Ffestinog and Vivian’s Quarry at the Dinorwig slate-quarrying complex have been produced as part of the Atlanterra Project. An animation of the railway inclined-planes at the Vivian’s Slate Quarry is already available.

The Atlanterra partnership has included representatives of areas that had some of the biggest international slate-producing industries. The largest industry developed in the Loire Valley in France in the medieval and post-medieval period and then was overtaken in scale by the nineteenth-century Welsh industry. In the twentieth century the Spanish slate industry has become the largest in Europe. Discussion and field visits have allowed draft documents to be produced as a foundation for future World Heritage Studies of slate and building-stone to be produced in consultation with a wider range of TICCIH members.

The methodology of producing animations for industrial archaeological interpretation continues and the annual Digital Past Conferences are one vehicle for carrying this discussion forward (check www.rcahmw.gov.uk for future conferences). Some further work has been carried-out as part of the Metal Links Irish-Welsh partnership led by the Royal Commission in Wales.

Still from animation of Hafod copper works

Crown Copyright: RCAHMW

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10 INDUSTRIAL ARCHAEOLOGY NEWS 169
Roller flour milling, white bread and the Millennium Mills, London

Following a description of roller flour milling, two mill examples are introduced: Cauldwell’s Mill in Derbyshire and the massive derelict Millennium Mills in London’s Royal Docks, now regarded as a cultural icon and a magnet for urban explorers.

Robert Carr

Roller flour milling largely supplanted traditional milling with millstones in the later nineteenth century. In order to feed the rapidly increasing British population, mass production of flour became imperative and roller mills are able to deal with very large quantities of grain. The fashion for white bread was another factor; roller flour-mills can easily produce white flour whereas traditional milling produces wholemeal brown and is unsuitable for the production of white flour. In a roller mill, the building houses several cabinets, which generally contain opposing pairs of power-driven cylindrical rollers. The process which takes place in such a mill grinds slowly and more subtly compared with putting grain through just a single pair of millstones in a traditional mill. In a roller mill the grain is split into several parts, giving rise to many output streams that flow up and down the mill, which at the end of the process can be reconsigned at will to produce a wide range of flours. In short, there is far more control of the product. Today 96 percent of flour comes from roller milling.

In more detail, very roughly, in the roller-milling process the grain is moistened and first passed through a series of break rollers and then sieved to separate out the fine particles of flour. This leaves intermediate-size middlings, semolina or farina used in pasta, with coarse particles of bran and wheat germ. This mixture then makes multiple passes through reduction rolls and is again sieved after each pass to maximise extraction of fine flour while removing coarse bran and particles of wheat germ. This is something of a half-baked description; in practice things are more complicated and precise details are kept secret from competitors.

What happens to grain in traditional milling when it is dropped between revolving millstones takes place quite rapidly, and millers describe this as ‘sudden death’. Compared with the ‘sudden death’ one gets with millstones, roller milling is a process of gradual reduction involving more processes which can take up to 20 – 30 minutes. A roller mill consists of a pair of rollers which may be corrugated or smooth and generally run at different speeds giving a scissor action. Roller mills separate the grain into its constituents; the major part is the endosperm which produces white flour. Wheat germ and bran are also produced and these can be put back into the white flour depending on the type of bread required. Wheat germ is added to white flour to make Hovis. This was originally marketed as Germ Bread – with such a name it did not sell well.

Because of large roller mills, especially at ports, and plant bakeries, we had essentially industrialised milling and baking a century or more ago. White bread was readily available and at a cheap price. During the First World War Germans were flabbergasted to discover that even poor English people ate white bread, a rare and costly luxury in their own country and especially so in wartime. Paradoxically, roller milling on an industrial scale was developed in Hungary and early British roller flour mills had German machinery. In order to make white flour the starchy part of the wheat, the endosperm, is isolated after removing the wheat germ and the bran with the fibre. Removing bran and fibre is undesirable from a nutritional viewpoint. Although white loaves are becoming less popular here, seventy five percent of bread sold in this country is still white. The popular expression ‘the best thing since sliced bread’ however is probably losing its currency.

At one time there were nearly 200 roller mills in the country but there are now far fewer. Mill enthusiasts have tended to concentrate on wind and water mills using millstones and have generally ignored roller milling, despite its having been around for a long time. There is however at least one preserved roller mill, Cauldwell’s Mill at Rowsley in Derbyshire. Built in 1874 and listed grade II*, this is an exception to the general trend, see www.caudwellsmill.co.uk/

At Cauldwell’s the roller mills are belt-driven from a water turbine. This mill has German machinery. There is also Calbourne Mill, a roller mill on the Isle of Wight open to visitors but this mill is not operated.

The above introduction to roller milling was inspired by a recent revelatory Newcomen lecture given by Rob Shorland-Ball, and is written from
notes taken at the time. Many readers of IA News will be mill experts and corrections and amendments to this article are most welcome. Regarding correct nomenclature, roller milling perhaps takes place in steelworks; this article is about roller flour milling.

On the south side of Royal Victoria Dock in London there was a big concentration of giant roller mills – veritably the Ostia of the British Empire. This was port milling which at its most developed handled grain in bulk and worked on shiploads at a time, batches of say 10,000 tons of grain. Ships’ holds were unloaded by means of pneumatic grain elevators and at the Royal Victoria Dock there were floating elevators that could be moved from ship to ship as desired. The great flour mills at Victoria Dock have been demolished except for the large Millennium Mills group. The architectural merit of the central block in an art deco style probably accounts for the survival of these buildings. At least the central block is now listed grade II.

The original Millennium Mills were built by William Vernon & Sons in 1905. The mill was named after a variety of flour which Vernon’s called ‘Millennium Flour’ from winning the Millers Challenge Cup at the 1899 International Bakers Exhibition. The mill complex at Victoria Dock suffered extensive damage as a result of the horrendous Silvertown Explosion of 1917 when 50 tons of TNT exploded at the nearby Brunner Mond works. Millennium Mills were rebuilt and in 1933 a ten-storey concrete art deco block was constructed. Heavy damage occurred again when the Royal Docks were bombed during the 1939-45 war. Reconstruction at the Millennium Mills took place from 1945 to 1950.

The Millennium Mills have been a particularly strong attraction for urban explorers. The exploration of derelict industrial sites and buildings without permission, or insurance, is a foolhardy and irresponsible activity, courting danger for its own sake. Not just industrial archaeologists, but many people including artists, photographers and urban explorers find abandoned industrial sites can be hauntingly beautiful, challenging and inspiring but fragile and easily spoilt. The intention of urban explorers is not to steal or cause damage and it seems that generally the dictum ‘leave only footprints and take only photographs’ is adhered to. The many photographs urban explorers post on websites reveal that a surprising amount of plant still exists inside the Millennium Mill. Industrial archaeologists familiar with this building assumed it had been gutted.

There are many urban explorer websites such as: guerrillaexploring.com or 28 dayslater.co.uk. Google these and add millennium mills. One photograph on the web shows ropes still in situ in a race. In flour mills with their dusty atmosphere fire was a constant threat and a rope race served as a fire break. There are also great arrays of pipes inside Millennium Mill and numerous small items of machinery survive. Apart from urban explorers this particular building as far as we know has only been visited by a conservation architect, probably more than years ago and never by industrial archaeologists. Roller flour mills of this period are relatively scarce. From the photographs on the web it would be well worth recording.

Jonathan Minns, who died in October last year, the day after his 75th birthday, was best known in industrial archaeology circles for creating The British Engineerium in a derelict Victorian pumping station, though this only represented a part of his extraordinary life.

He had also been a London plumber, a Paris actor, a rancher in Mexico and had run a marriage guidance agency; for nearly 20 years he was a judge for the BBC’s Tomorrow’s World Award for Invention.

Dismayed at the imminent demolition of the Goldstone pumping station in Hove in 1971, he managed to have it listed grade II*. Restored, it opened as a steam museum in 1976.

Besides the original Easton and Anderson beam engine which had been installed in the pumping station in 1873 the museum included a model of Locomotion No1 built by George Stephenson himself and another model engine signed by Richard Trevithick. The British Engineerium was never just a museum, under Jonathan’s direction it was responsible for some 168 projects, here in the U.K. and around the world. Anywhere that needed the specialist expertise of the Engineerium’s team.

However, with a failed lottery bid, no external financial support, income only a fraction of running costs, even with Minns subsidising it as best he could, the museum could not survive. The Engineerium closed in 2006 and was put up for auction.

“In every other profession, in art, in law, in medicine, in architecture, students are taught the history of the discipline. They understand that the past informs the present,” he said, “but not in engineering, where the past is seen as irrelevant stuff... And yet the world has never had more need of engineers.”

His Engineerium was in total contrast to many modern museums where actual artefacts are stored away to be replaced by multimedia interactive displays. “Pure interpretation is not enough. Someone has to get their hands dirty.”

“Our fate is a microcosm of the country’s attitude to value-added manufacturing,” Minns reflected. “We make nothing, and we don’t care. We’re not even a nation of shopkeepers, we’re a nation of shelf-stackers — Napoleon must be screaming with laughter.”

His life might be summarised in his description of the four heart attacks he suffered in 2002 – “interesting”.


Mike Holland, a Brighton businessman, bought the entire museum and its contents on the eve of the auction and The British Engineerium expects to reopen in 2016 after a full restoration.
A selection of the delights awaiting us at the AIA conference based in Chester

All photos Mike Nevell
Meetings and Representation

In 2013 the AIA Council met four times: Leicester in February, London in June, Dundee in August and Coalbrookdale in November. Many Council members also represent the AIA and industrial archaeology matters in other groups and committees to promote the Object of the Association: on the English Heritage Industrial Archaeology Panel, on the National Trust Archaeology Panel, on CBA – the Council for British Archaeology as Vice President, on the East Midlands CBA committee as chairman, on the National Railway Heritage Awards committee and on the Leicestershire Industrial History Society as Vice President (Marilyn Palmer); on the CBA National Listed Buildings panel, on the Heritage Railway Association and the North York Moors National Park archaeological panel, as archivist to the Heritage Railway Association and both as a director of, and archivist to, the North York Moors Historical Railway Trust (Mark Sissens); on the Industrial Heritage Support Officer steering group (Keith Falconer, Barrie Trinder, Stephen Hughes, Miles Ogletorpe and Mark Watson). 

The Conference was held at Dundee University in April and one in Switzerland in October. The overseas one was very successful but the Ironbridge Weekend had to be cancelled due to insufficient applicants. The Swiss one – the European Federation of Associations of Industrial and Technical Heritage (E-FAITH) meeting – was held in the canton of Vaud Switzerland at Neuchatel/La Chaux-de-Fonds. AIA was represented at this the 7th European Industrial & Technical Heritage Weekend by our E-FAITH Liaison Officer, Paul Sautler, who is its immediate past-president. A report on the Weekend appeared in IA News no 167. In 2013, the Parliamentary Assembly of the Council of Europe endorsed E-FAITH’s campaign for 2015 to be designated ‘European Industrial Heritage Year’ and AIA’s Council agreed that Paul Sautler and AIA’s Vice-Chairman, Keith Falconer, should work on a project in support of the year.

Weekend Meetings

There were two meetings planned for 2013, one in Ironbridge in April and one in Switzerland in October. The overseas one was very successful but the Ironbridge Weekend had to be cancelled due to insufficient applicants. The Swiss one – the European Federation of Associations of Industrial and Technical Heritage (E-FAITH) meeting – was held in the canton of Vaud Switzerland at Neuchatel/La Chaux-de-Fonds. AIA was represented at this the 7th European Industrial & Technical Heritage Weekend by our E-FAITH Liaison Officer, Paul Sautler, who is its immediate past-president. A report on the Weekend appeared in IA News no 167. In 2013, the Parliamentary Assembly of the Council of Europe endorsed E-FAITH’s campaign for 2015 to be designated ‘European Industrial Heritage Year’ and AIA’s Council agreed that Paul Sautler and AIA’s Vice-Chairman, Keith Falconer, should work on a project in support of the year.

Annual Conference 2013

The Conference was held at Dundee University from 8 to 15 August and was well supported with 93 delegates attending over the seven days. A series of fascinating presentations was on offer for the Friday Seminar on Iron Structures, including a session on innovations in iron buildings from David Mitchell, an exploration of why the failed in 1879 by Professor lan MacLeod, and an assessment of, and the strengthening and repair of the 1887 replacement. In the afternoon many of the delegates opted for a hard hat exploration inside the girders of the bridge to see the re-painting project close up. A barbecue was enjoyed next to the 1901 ship RRS Discovery that took Scott to and the annual dinner was held on board the 1824 HMS Unicorn. Following the AGM on the 11th August attended by 72 members and guests Miles Ogletorpe gave the Rolt Memorial Lecture on ’The public benefit of Industrial Heritage’. As well as the essential visits to whisky distilleries, highlights of the week included Arkwright’s Stanley Mills begun in 1875 and now part museum and part accommodation, the remarkable Blairgowrie printing works, the 1832 waterworks built entirely of cast iron, and the Verdant Works jute mill. Full credit must go to our Conference organisers John McGuinness and Stephen Miles, to the hosts at the study visit sites, and especially to Mark Watson for planning such an exciting programme.

Publications

Hot on the heels of the UK-centric Industrial Archaeology: A Handbook came another ‘best practice’ guide – Industrial Heritage Re-tooled, the TICCIH international guide to industrial heritage conservation. Among the 33 articles by the great and the good of industrial heritage are seven by AIA members (Sir Neil Cossons, Stuart Smith, Keith Falconer, Barrie Trinder, Stephen Hughes, Miles Ogletorpe and Mark Watson).

IA News: Four issues under the editorship of Chris Barney were published by the Association, which aims to encourage high standards in all aspects of the study of industrial archaeology. This quarterly is the bulletin and main communication organ of the AIA. Illustrated reports covered all the Association’s activities as well as short technical articles, reports on affiliated societies, restoration grants, regional news, international news, visits, conferences, letters, etc. Highlights during 2013 included illustrated reports on the TICCIH Congress in Taiwan, the tour to the Ruhr, and the Annual Conference in Dundee.

IA Review: Peer reviewed and with an international Editorial Board, the journal of the AIA edited by Helen Gomersall and Dr Michael Nevell provides a forum for a wide range of specialist interests in industrial archaeology. Due to continued serious illness in the families of both editors, both the 2013 issues of Industrial Archaeology Review were slightly delayed and Helen resigned as joint editor in November to be replaced by Dr Ian West. The May issue, Volume 35.1, came out in August and covered: The Archaeology of the Bridgewater Canal; Telegraphy and Telephones; Ports – Land and Air; The Archaeology of Communications’ Digital Age; The Archaeology of Military Communications. The November issue, Volume 35.2, came out in December with articles on The Twentieth-Century Revolution in Textile Machines and Processes –
Spinning and Weaving: Workers’ Housing at Portlaw, County Waterford, Ireland; Back-to-Back Housing in Textile Lancashire; and The Role of the Train in the Exploitation of the Cerro Muriano Mine, Cordoba, Spain.

Awards
In the latter part of the year the terms and prizes were reviewed and updated, and judging panels appointed. As well as the usual range of awards, a new Digital Initiative Award was instigated from the Peter Neaverson legacy fund. To encourage scholarship and investigation in the industrial archaeology field, awards were made to students and individuals:

Two Peter Neaverson Awards for Outstanding Scholarship were made: To Bjørn Basberg for The Shore Whaling Stations of South Georgia – a study in Antarctic industrial archaeology; and to Kathryn Morrison and John Minnis for Cascapes – the Motor Car, Architecture and Landscape in England.

The Peter Neaverson Digital Initiative Award went to RCAHMw and ThinkPlay.tv for the Habot Copper Works animation.

For the first time since its establishment a Peter Neaverson Student Travel Bursary was awarded, to Scott Smith, a PhD student at Dundee University to travel to South Georgia with Bjørn Basberg.

The Undergraduate Dissertation Award went to Lindsay Fricker of Manchester University for Investigating Human Movement in a (Post)-Industrial Landscape.

The Postgraduate Dissertation Award went to Stephen Wass of Leicester University for A Way with Water: water resources and the life of an eighteenth century park.

The Dorothea Award for a restoration project went to the Sherborne Steam and Waterwheel Centre.

Grants
In 2013 the Association received a further very generous amount from the same anonymous donor to support conservation projects. These new projects and progress on the on-going projects were described in greater detail to AIA members at the annual conference and there was widespread support for them. As is usually the case with grants, the fund was heavily over-subscribed with nine new applications being received for funding totalling £137,350. Four awards were made:

Further restoration of the Danzeys Green Windmill at the Avoncroft Museum of Buildings, £6,790.

Restoration of the derelict Bowbridge Lock on the Thames & Severn Canal by the Cotswold Canal Trust, £20,000.

Restoration of a 1950 Thompson composite corridor railway carriage No 18477 by the London & North Eastern Railway Coach Association, £15,000.

Rebuilding of the 1927 Ryde Pier Tram No 2 on the Isle of Wight Steam Railway by the Isle of Wight Railway Company. £15,000.

Consultation
AIA Council responded on the draft Heritage Strategy for Scottish Canals, on the Heritage Bill for Wales, on the joint consultation on the Historic Environment for Scotland and the merger of Historic Scotland and the Royal Commission on the Ancient and Historic Monuments of Scotland. English Heritage has convened an advisory group to its Industrial Archaeology Panel to review the 2008-13 Strategic Vision of Industrial Heritage, comprising Marilyn Palmer, Tony Crosby and Gill Chitty.

Industrial Heritage Support Officer
Ian Bapty started in the role back in September 2012 and the first year of the project has kept him very busy. One of the basic functions is to act as a ‘first step’ for information for industrial heritage sites with an advisory service being launched in April. Latest updates are posted on the project blog at http://industrialheritagesupport.wordpress.com. Another key area is establishing new partnerships, including facilitating co-working with The Conservation Volunteers and also with the Institution of Mechanical Engineers whose members combine professional expertise with a long track record of promoting industrial heritage. The project is also facilitating training and mentoring support for industrial heritage groups.

Visits
AIA Spring Tour – The Ruhr, May 2013
The tour visited 16 sites covering coal, coke, steel, railways, canals and social housing including the most impressive sites in the region such as the Kokerei Hansa, Zeche Zollverein and the Wuppertal overhead railway. Travel was by coach starting and finishing in London. 43 people joined the tour including a number of non-members and some new faces. This is an encouraging level of involvement which demonstrated that the price (from £699) did not put people off. We have taken the opportunity to write to the non-members encouraging them to join. A report was written for IA News and another for the SIA Newsletter in the US. The tour was run by Heritage of Industry and thanks are particularly due to Sue Constable for her hard work in organising the itinerary.

Country House Comfort & Convenience – The South West, April/May 2013
Professor Marilyn Palmer and Dr Ian West led this exploration of the impact of technology on some of our great Country Houses – the first in a series of tours covering the UK. In 3 days we visited 5 houses: Tylentsetfield, Hestercombe, Lanhydrock, Saltram and Castle Drogo, covering Somerset, Devon and Cornwall. Working with the Collections Managers we mostly had access to the properties early in the morning before the public were admitted and in some cases visited areas not normally on the tourist route. These tours are organised by Heritage of Industry and are designed to encourage more people to gain an interest in how the early adoption of technology affected those both above and below stairs.

Financial statements
The financial statements are prepared in accordance with the Financial Reporting Standards for Smaller Entities (effective April 2008), the Companies Act 2006 and the recommendations of the Statement of Recommended Practice – Accounting and Reporting by Charities.

Results
According to the draft accounts, not yet approved by the independent examiners, the net incoming resources for the year amounted to £37,494, of which £34,917 is attributable to restricted funds (2012: net incoming resources of £7,204 which included £545 attributable to restricted funds). In preparing this report, the Council has taken advantage of special exemptions applicable to small companies conferred by Schedule 8 of the Companies Act 2006.

Reserves Policy
The Council members have assessed the major risks to which the Association is exposed, in particular those related to the operations and finances of the Association, and are satisfied that systems are in place to mitigate exposure to the major risks. In line with Charity Commission recommendations, they have reviewed the Reserves Policy having examined potential risks, and have agreed to maintain a contingency for a late cancellation of the annual conference, for a cancellation of an issue of Industrial Archaeology Review, and for a sufficient reserve to cover cash flow fluctuations during the year. The Council considers that a reserve of not less than £60,000 is required.

Changes on Council
Keith Falconer filled the vacancy for Vice Chairman at the AGM. Our congratulations go to him on the richly-deserved award of the OBE in the Queen’s Birthday Honours list in June. Past Chairman Tony Crosby was appointed as a Council member and Stephen Dewhirst and Michael Nevell were re-appointed for a further 3-year term at the 2013 AGM in August.

David de Haan, Honorary Secretary

Endangered Sites Report
As usual, the CBA’s data base has been monitored for listed building and planning applications affecting industrial sites on which the Association might wish to comment.

As a result the AIA have commented on the following:
- demolition of a 25 bay, single storey weaving shed at Hollins Mill, Todmorden, Calderdale, restoration work at The Mill, Hewish Mill Farm, Crewkerne, Somerset which was supported; demolition of a Nissen hut in Sawbridgeworth, Hertfordshire which was also supported; demolition of buildings at The Island Site, the Slate Quay, Caernarfon; conversion at the former textile mill buildings at Viney Bridge Mills, South Street, Crewkerne and again on the demolition of the tannery buildings at Whist House,
Tannery Lane, Ashford, and demolition at the Thanet Press (formerly the Eyre and Spottiswoode Press buildings), Union Crescent, Margate.

Of particular note was the conversion of Royal William Yard at Plymouth – the Melville Building which was supported. We have also commented on proposed demolition of the Briarfield signal box in Pendle – a local referral – and the demolition of some of the buildings and conversion of others at Kimberley Brewery; brewery buildings and malthouses, Nottinghamshire which was another local referral.

Sometimes decision notices come relatively quickly. The results are known on Hollins Mill and in this case the application to demolish was refused as was the application in respect of the demolition of Briarfield Signal Box. However, the decision to demolish Goole Custom House (another local referral) was allowed.

I am always pleased to hear of potential new cases from individuals and I am also always pleased to hear from anyone who may wish to help with the process of commenting on applications either in their geographical area or in respect of a specific subject.

Amber Patrick, Endangered Sites Officer

Our website

Revamping the AIA website is proceeding. The broad issues were discussed and agreed at the Council meeting on 1 March and a brief to present to prospective website designers will shortly be complete. It is hoped that their proposals will be available by the next Council meeting in June.

Welcome to new members

Mr Brian Brown
High Wycombe
Mr IP Walker
Croydon
Joseph Critchley
Essex Society for Archaeology and History
John Hayward
New York
Kenneth McCoy
Gent, Belgium
Russel Palmer
Stephen Teather

LETTERS

British Industrial Development in World War I

The centenary of the outbreak of the First World War is attracting much attention both locally and nationally and naturally most of it will be focused on those who took part in the notorious land battles in which the number of casualties, both those killed and those maimed, were tremendous. In the past there has not been the same level of interest in the home front as there has been for the 1939-45 war. For this reason I found Patricia Fara’s article A Social Laboratory in the February edition of History Today inspiring.

From the IA point of view three things come out of the article; first, that as a consequence of the British contempt for science and scientists, industry in this country had failed to develop and relied on imports for the products of the new technologies, which were to be essential to the conduct of a modern war. Secondly, as a consequence many new industries had to be created in a hurry, in addition to the expansion of many existing ones. Thirdly, it describes the need to introduce women into both technical development and production roles.

Patricia Fara’s article is weighted to the development of scientific research and the employment of women generally. However, the photos of women workers in munitions factories are just as significant as those more generally known from the later war. Indeed the earlier painting of female lathe workers in Sheffield is every bit as iconic as the well-known 1943 painting by Laura Knight of Ruby Loftus screwing a breech ring.

The only industrial process expressly referred to by Fara is the making of acetone, which was needed for the production of explosives. Chaim Weizmann had developed a technique for producing it by fermenting maize. According to Farr, with the encouragement of Winston Churchill, the admiralty took over a gin distillery in the south London borough of Bromley to conduct this process on an industrial scale. When the supply of maize dried up, conkers were used instead. Does anyone know any details of this distillery or of the process? This was clearly just one of many such industrial processes for which this association should be encouraging the research and recording as part of the centenary activities.

John McGuinness

Boat weighing machine – the full story

Having languished under a bridge arch in Cardiff in a dismantled state for many years, this British Transport Collection object was found a home at the newly opened Waterways Museum at Stoke Bruerne. When the Curator of that Museum was transferred to the new British Waterways Museum at Gloucester in the 80s it became obvious that there were going to be problems in caring for the machine in the future and research was carried out at that time into the possible return of the Machine to Cardiff. Earlier Stoke Bruerne had suffered from a somewhat blanket Listing Policy which paid little or no attention to the originality or otherwise of the canal area so that the original lock on the site which had already undergone several changes of use was listed along with the weighing machine it now contained.

That listed status led to the plan to return the machine to Wales foundering and a proposal to put a covering roof over the machine to protect it from the weather also failed to gain approval from the local council.

Subsequently the Stoke Bruerne Museum was transferred to The Waterways Trust and became a satellite of the National Waterways Museum, Gloucester and Ellesmere Port Museums. However, it proved impossible to bring the facilities at Stoke Bruerne up to the Accreditation Standards necessary for a ‘National’ Museum given the very limited funding available to the Trust and the name of the Museum was changed to the Canal Museum to distinguish it from the other two, even though it was still controlled by the Trust. Nothing at all to do with ‘ceasing to see itself as a national canal museum’ but the loss of accreditation would have been a severe blow to the Museum as it would have taken away any chance of future grants and MLA/ACE assistance.

As to wanting to get rid of the machine or ‘the information leaflet being unavailable for years’, both statements are incorrect. The Waterways Trust were unable to fund a full time Collections Manager for Stoke Bruerne but a lot of work was done locally by the Stoke Bruerne Canal Partnership and The Waterways Trust to find a solution to the problem of the deteriorating machine. Two independent Conservation Studies were made with the aim of a funding appeal and both concluded that to be cost effective any conservation work would have to be done in conjunction with a roof being built over the Lock. The District Council were still opposed to this but something had to be done! I was assured by the then Museum staff that anyone asking in the museum for the out of date leaflet would have been given one – they were not on open display because they did not reflect the current position, but they were available on request.

One of the first tasks given to me in being appointed Joint Honorary Curator of the Canal Museum in 2008 was to try to find a solution to...
this stand off. Bearing in mind the legal position in regard to museum acquisitions, the National Museum of Wales was again approached and very complicated negotiations took place to secure the best possible future for the weighing machine. Once both sets of museum trustees agreed on the transfer, Listed Building Consent was obtained for the machines removal and as the report in I. A. News says, the weighing machine is being re-erected rather closer to some of the previous sites which it has occupied.

Mike Constable

Is this the problem?

In I.A. News 168 you asked readers for suggestions as to why membership of the Association may be dwindling.

The problem, I feel, is that most of our Industrial Heritage has been cleared away and what little is left has been so changed that it no longer has the integrity or even character. So it has become a subject that now disappoints.

As an example, several pieces of sculpture appeared in Blaenau: two sets of twin towers, four fins and what appears to be an upside down tree. Although I like modern art, do these shapes have anything to do with Blaenau?

Compare the latter tree with the quarry crane, just half a mile further up the road – an artefact that clearly belongs, is understandable, and has a practical beauty. Blaenau already has its own unique sculpture in such items as these and in the form of dramatic drum houses, eerie ruins, soaring inclines, beautifully crafted dams, awesome caverns, stupendous tips and daringly engineered tramways.

None of these were the product of the art college culture. They were created by the workmen themselves, positioned and shaped precisely to their location and purpose and every stone placed by hand with intelligence, skill and pride. You can’t get more authentic than that. Not ‘fine’ art but useful art in the original sense of the word. All of it indigenous and all of it irreplaceable.

But whereas the future of the above modern art is secure, we cannot say the same for the quarry features, some of which are being removed or changed at this moment. With Blaenau now officially recognised by Cadw as a landscape of Outstanding Historic Interest, surely it is the care and protection of this – Blaenau’s real culture and heritage that we should be focussing on.

£4.5 million spent on artifying the town centre – not a penny on preserving the town’s quarry structures.

Falcon D. Hildred

Mellor Mill engine Information needed

The First Horizontal Textile Mill Engine? When Samuel Oldknow built Mellor Mill in 1792 on the Cheshire/Derbyshire border, it was probably the largest water driven complex in existence. Prolonged drought forced John Clayton & Co, who then ran the mill, to install a steam engine in 1860. This engine was built by Benjamin Goodfellow of Hyde, Cheshire, and was a horizontal cross compound with a high pressure cylinder of 14 inches bore and 4 feet stroke and a low pressure cylinder of 27 inches bore and 2 feet 6 inches stroke. The reason for the unequal strokes was that the condenser and air pump were horizontal and in line with the low pressure cylinder. Air pumps could only tolerate low piston speeds and this arrangement allowed the high pressure cylinder to operate at a higher piston speed. The design was not particularly successful and only a few were built. The engine was put up for sale in 1877.

Mellor Archaeological Trust is currently excavating the site. Parts of the stone engine bed and some holding down bolts have been exposed. The boiler seatings have been revealed and it is apparent that an additional boiler was installed adjacent to the original one. However, because of the slope of the ground, the second boiler was about 3 feet higher than the first, an unusual arrangement.

Does anyone know of a horizontal textile mill engine prior to 1860? Does anyone know anything of the replacement engine of 1878?

John Glithero

Pointing the way

I was interested to see the image of the concrete arrow for US airmail routes, on page 19 of I.A. News 168. This reminded me of two arrows I came across in the spring of 2012. The first was in the wartime Ashley Walk bombing range in the New Forest, Hampshire, for pointing the airmen towards a target. And then, surprisingly within a month, my group spotted a second one, this time on Brean Down on the Somerset coast where there was a range in the Bristol Channel. I have never seen one before, or since, but I wonder how many there are out there in the UK? Incidentally, the Ashley Walk bombing range has, among other things, rings marked out in chalk surrounding a central target, not unlike a massive dart board. These are still traceable on the ground but they obviously make more sense when seen from the air as intended.

Peter Stanier, Shaftesbury

Crane Accidents.

Health and Safety is a very two edged sword. Whilst agreeing with the author of the article on Crane Accidents in I.A. News 168, that most accidents occur when lifting, many of the tasks which now require a Cran ated used to be performed quite safely by more basic methods. The illustration is a case in point. Replacement of lock gates which were formerly lifted into place manually now requires a crane. Location often means a much larger crane than would be necessary for a close lift, as access to many locks is difficult for road vehicles and lifting has to take place from some distance away from the water’s edge. In this accident the crane pictured was NOT lifting but being driven along the towpath to a lock where it was needed. Towpaths were not built to take heavy vehicles and in this case a weakness in the towpath gave way, tipping the crane into the canal.

Incidentally, the launch of the part AIA funded Box Boat restoration at Ellesmere was delayed by the requirement to fulfil the new guidelines referred to in the article, even though there had not been a problem on previous crane operations at the site.

Mike Constable

Traditional artisanal industry

I am a PhD candidate in History and Philosophy of Science preparing my thesis about the French rosin industry at the University of Bordeaux. I am working for the Euroscientist webzine
I am curious as to whether you might know any attempts to revive a traditional industry or to reinvent the use of once exploited, but now forgotten, natural resources in your country in an innovative ‘science based’ way.

The starting point for the article would be obviously my own research topic, namely the rosin and pine industry near Bordeaux, which fell from grace in 1960, but through the intensive efforts of numerous chemists has now a chance to recover. My goal is to find similar examples in other countries and try to answer to what extent they succeed as a way to fight the economic crisis.

I would be extremely grateful for your help,
From Marcin Krasnodebski, marcin.krasnodebski1@gmail.com

A door full of holes
I have just read Bob Carr’s letter on the old pub door. From the look of the hinges I doubt if it is very old. It looks to me as though the holes were drilled after the door was hung as there do not appear to be any holes under the hinges. That would explain why the holes were drilled from that side as the pressure of drilling would have been taken on the door stops. Looking at the holes it appears as if there were initially rows of larger holes drilled down each side of each board, then later in filled with smaller ones. The mass of holes at the end of the lower hinge was to allow for not being able to drill where the hinge is.

Ventilation seems to have been the most likely purpose. A lot of small holes rather than a few much larger ones may have been done to keep flies, wasps and other large insects out.

John McGuiness

Elsecar ironworks
As part of our work on the Elsecar Ironworks a volunteer member of the research team identified an astonishing ‘product’ of the business, I’ve been searching around and turned up a number of impressive examples. Please contact me if you have any thoughts about other sources, indexes, databases, mailing lists, people etc., that I might be able to use to identify other pieces of engineering across the UK that may have also come from the Ironworks.

Recent discoveries include:
A suspension bridge on the Island of Reunion, built 1820-1 at Elsecar (and erected in a field to make sure it worked!), thought to have been designed by Isambard Kingdom Brunel and his father (his father’s practice was the designer, and a very young Isambard had joined the practice a year or two before – would this make it IKB’s first suspension bridge?).

Stanley Ferry aqueduct at Wakefield; built in Elsecar 1836-9, at a then cost of £50,000 and considered the finest feat of engineering to that date.

Two iron bridges over the Don River in Sheffield, 1865, to replace bridges washed away by the Great Flood of 1864. Still in place.

Dr John Tanner Project Development Officer
Barnsley MBC Arts, Museums & Archives
JohnTanner@barnsley.gov.uk

CELEBRATING STEAM SYMPOSIUM
Saturday, 22 November 2014
9.30 to 5.00
Devizes Town Hall.
Tickets cost £17.00 (includes tea and coffee).

Speakers:
Richard K Morris – The Archaeology of Railways
Dr Rosa Matheson – Death, Dynamite and Disaster – A Grisly History of 19th Century Railways
John Winterburn – Jordanese Railways
Tim Bryan – The Inheritance – GWR Between the Wars
Colin Maggs – History of the Great Western Railway
Mark Gooover and Mike Stone – Signalling – Westinghouse and the Railway Industry in Chippenham

Tickets available from Wiltshire Heritage Museum, Devizes
Tel 01380 727369 wansh@wiltshireheritage.org.uk
British Archaeology Awards

The BAA held its AGM on 3 February at The Society of Antiquaries, London, under its new chair, Deborah Williams.

Eila Macqueen, Director of Archaeology Scotland, joined the BAA board in September. Chris Calling is to retire in July.

The new board of trustees now consists of Gill Andrews (hon treasurer), Louise Ennis (hon secretary), Christopher Catling, Andrew Davidson, Brian Davison, Peter Hinton, John Lewis, Eila Macqueen, Paul Stamper and Deborah Williams (chairman).

The new BAA trustees have a considerable task ahead of them and will consider strategy, aims and objectives — and looking ahead, they will have to develop a business plan.

There are sufficient funds to run the next two sets of Awards. Following this the future is uncertain. Sponsorship is now a serious problem. English Heritage et al have made it clear that the BAA cannot continue to rely on their financial support. Funding by the Heritage Agencies is likely to fall dramatically.

Regarding the Heritage Benchmark Scheme the property and development sector have no interest because of the current state of the market.

Similarly the aggregates industry has said “no” because of the economic situation.

The new website, www.archaeologicalawards.com, is a great improvement. This is the result of very valuable sponsorship in kind.

The Judging Panels are in place. For the Book Award, Chris Calling is chairman.

The Awards Ceremony will be held on Monday 14 July 2014 in the Stevenson lecture theatre at the British Museum, London, with Loyd Grossman and the same technician and photographer as in 2012.

Robert Carr

National Heritage Landmarks Partnership Grants

Biffa Award has pledged £1.5m over three years to the Association of Independent Museums (AIM) for the National Heritage Landmarks Partnership Scheme. The Scheme will create a high profile network of interpretation and education projects across the UK that will showcase the far-reaching changes in industrial development that have shaped our nation’s history.

Annual awards are allocated to projects that help transform derelict buildings and sites into inspirational resources that tell the stories of people, processes, industrial development and change.

Commenting on the latest round of awards, Sir Neil Cossons, Chairman of the Advisory Panel, said:

“The second round of this three-year award scheme, like the first, resulted in applications of the highest quality and has again demonstrated the significance of Britain’s outstanding industrial heritage. All four grants have been awarded to sites of national importance and will enable them to enhance access for the public and improve interpretation”.

Chatham Historic Dockyard Trust: £120,000

Establishing a free-to-enter Discovery Centre within the Wheelwrights’ Shop creating a sense of arrival, orientation and initial interpretation to the tentative World Heritage Site of Chatham Dockyard and its defences.

The Arkwright Society, Sir Richard Arkwright’s Cromford Mills, Derbyshire: £115,000

This project will provide public access to, and interpretation of Sir Richard Arkwright’s first mill, recognised as the birthplace of the factory system. It will provide a discrete audio visual experience which will enhance the new World Heritage Site Gateway which is currently being developed at Cromford Mills.

Brunel Museum: £122,000

Restoring public access to Marc Brunel’s entrance shaft at Rotherhithe which made the first Thames Tunnel possible and to provide interpretation of its significance in industrial history.

Underfall Yard Trust: £122,000

Repairing, conserving, interpreting and providing public access to the working Victorian Hydraulic Pump House with original pumps and accumulators in Bristol’s Underfall Yard, showcasing the revolutionary technology of hydraulic power.

Biffa Award is a multi-million pound environment fund managed by the Royal Society of Wildlife Trusts (RSWT), which utilises landfill tax credits donated by Biffa Group Ltd.

Under the Landfill Tax Regulations 1996, landfill operators like Biffa Group Ltd are liable for taxes on waste deposited in landfill sites. The Landfill Communities Fund allows them to donate a small percentage of their tax liability to projects working to improve communities living within the vicinity of landfill sites. To date, Biffa Award has made grants totalling more than £145 million to thousands of worthwhile projects.

National Gas Museum

Further to brief items in issues 166 and 167 of IA News, the National Gas Museum in Leicester has a new curator, John Beckerson (formerly of the Museum of Science and Industry in Manchester). Refurbishment of the museum is continuing and it is once again open to the public on Wednesday, Thursday and Friday afternoons most weeks. Precise opening times and other details can be found on the museum’s website www.nationalgasmuseum.org.uk

The City of Adelaide back in Australia

The City of Adelaide finally has arrived in Adelaide. The journey started last September when the clipper on its cradle was moved by barge to Chatham. There was a brief delay before the newly elected Australian government confirmed the final funding

On 24 October the City of Adelaide arrived at Dordrecht in the Netherlands, to undergo the necessary treatment to satisfy Australian quarantine requirements. Following fumigation, the clipper was lifted aboard the heavy lift ship MV Palanpur on 22 November for transport from the Netherlands.

City of Adelaide then crossed the Atlantic arriving in the United States’ port of Norfolk, Virginia on 9 December to load six locomotives bound for Western Australia. On 13 December, the Palanpur continued southward to rejoin the historic clipper route between the UK and Australia off the coast of Brazil. In January, the passage briefly departed from the historic route for the Palanpur to take on fuel in Cape Town, South Africa, a port frequented by the ship on

City of Adelaide loaded aboard heavy lift vessel Palanpur

Photo: Trevor Powell

—

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northbound voyages but last visited in 1890. Following the voyage’s Western Australia stop, the final leg of the City of Adelaide’s last passage concluded with arrival at Port Adelaide, at 6:30 am on 3 February.

**Excalibur Estate Catford fights on**

Despite my suggestions to the contrary, almost no actual demolition has taken place at this extensive South East London prefab estate. Some groups of adjacent prefabs are empty and these areas have been boarded off by tall black hoardings but nearly all the bungalows are still there and essentially the area retains its former secluded tranquil atmosphere. On an excellent guided walk which took place on Saturday 15 March, a spokesman claimed that 116 out of 180 prefabs are still occupied. This organised event included a visit to the prefab museum, now set up at 17 Melliot Road SE6, and attracted a large gathering, despite minimal publicity. One man had come from Scotland.

As well as local people with children, the gathering included artists, photographers, architects, planners, sociologists, local historians and yes the odd industrial archaeologist. We were even able to visit the interior of a prefab which is still lived in – the effect is surprisingly spacious. Clearly some residents take great care and have real pride in the interiors of their homes. It was said that they are easy to heat and warm in winter. These Catford prefabs have both a front and a back garden and some have off-street parking – all this within London Zone 3.

The Twentieth Century Society is in favour of retaining the Estate. The prefabs are of two types and English Heritage has listed a total of six in Persant Road. They have separate toilet and bathrooms and were originally fitted with a gas refrigerator. A resident expressed the opinion that this was ‘like heaven’ compared with some more recent council ‘units’ in the Borough and many seemed really determined to stay put. Some of the prefabs are owner occupied and people have exercised their Right to Buy, even quite recently, and with the Estate condemned. The Local Authority, the London Borough of Lewisham, plans to demolish the prefabs and build higher rise accommodation. They are annoyed that six prefabs have been listed and claim the English Heritage listing is irresponsible when needy people urgently require decent housing.

One might argue that the great interest currently being shown in prefabs and their occupants is a minority one and perhaps improper, just a trendy middle-class folksy interest comparable to that which occurred at the time the prefabs were built when a fascination with narrow boats and the people who lived in their cabins had a similar vogue. Plus ça change.

In the bad winter of 1946-1947 snow on the prefab roofs exceeded three feet in depth but fortunately no failures occurred. The prisoners of war who built the bungalows had done a good job, they were Germans and Italians captured in North Africa. Eddie O’Mahony, now well into his nineties, has lived in a prefab here since they were built. In 2013 Eddie was visited by Lord Neil Kinnock who himself was brought up in a prefab.

The intended clearance of the Excalibur prefab apparently ran into difficulties because they contain some asbestos, making straight bulldozing out of the question. Each prefab would have to be demolished piecemeal by hand while carefully observing the necessary safety precautions – an expensive process. There is also a legal issue. It is claimed that in the 1940s the land was only lent to the London County Council for the erection of these ‘temporary’ prefabs and that once they are demolished the agreement was that ownership of the land should revert to the original owner. While all this is sorted out we have a lull and anyone interested in the post-war prefab will find a visit to this estate worthwhile.

Robert Carr

**Short Scion returns to Rochester.**

A Short Scion II, has returned to Rochester, or at least the fuselage and wings have. The plane is to be restored to become a static display aircraft for the Medway Aircraft Preservation Society.

The Scion, designed by Arthur Gouge, Shorts chief designer, first flown in 1933, was a five seat feeder-liner constructed with welded steel fuselage frame and duralumin wings, with fabric covered fuselage, wings and tail planes. It was powered by two Pobjoy Niagara engines of 90 hp. This particular aircraft, G-AEZF, was one of six built under licence by Pobjoy Airmotors and Aircraft Ltd. at Rochester Airport, and first flew in December 1937 (by which time Pobjoy’s was effectively a subsidiary of Short Bros.).

Scion G-AEZF was sold to Elders Colonial Airways and, equipped with floats, operated between Bathurst and Freetown, Sierra Leone before being returned to Britain to see service.
with 24 Elementary Flying Training School during the Second World War. Post war it was operated by Air Couriers Ltd. before becoming a static display aircraft for the Historic Aircraft Society at Southend Airport. In a deteriorated state, it was eventually put in storage at Redhill before returning to Rochester in June.

This aircraft is one of three Scions built at Rochester known to survive. Of the other two, one is at the Ulster Folk and Transport Museum, but not on display. The other, VH-UTV, built by Short Bros. in 1936 for Guinea Airlines, Adelaide, is in the course of restoration in Sydney.

MAPSL now are trying to obtain material for the restoration and are seeking plans, any components that may have survived and two Pobjoy Niagara engines.

The workshop of the Medway Aircraft Preservation Society at Rochester Airport can be visited between 9 and 12.30 on Monday, Wednesday and Sunday.

For more details: www.mapsl.co.uk

Jim Preston

Debate on the future of English Heritage

In Westminster Hall on 2 April parliamentarians discussed the proposals to split English Heritage after 2015 in a debate sponsored by Jenny Chapman, Labour MP for Darlington.

The majority of concerns raised from both sides centred on the financial viability of the new charity, English Heritage, the funding and scope of Historic England and with repeated requests for more detail. Gordon Marsden, (Lab) MP for Blackpool, called for a full debate on the new model on the floors of both Houses. Roberta Blackman Woods (Lab), MP for City of Durham, felt insufficient weight had been given to Historic England in the consultation document. John Whittingdale (Con), MP for Maldon and Chair of the Culture Media and Sport Select Committee, worried whether the small percentage of sites in the National Heritage Collection that generated income could sustain the rest without the risk of raiding the funding meant for Historic England or to a diverting of some properties. He also noted the impact of aggressive marketing on the rest of the sector and finally referred to the deep concerns over the loss of expertise in local authorities which would make the job of Historic England far more difficult.

Ed Vaizey, Culture Minister, winding up for the Government assured Members that "The two new bodies that are effectively being created – Historic England, the regulator of heritage and English Heritage which will run and manage the properties on behalf of the nation – will still have exactly the same powers as they have now." He confirmed that English Heritage would continue as an owner of last resort although financial factors would be taken into account as they are now. "Change is happening but the fundamentals will not change. Historic England will continue its brilliant role as steward of our wide historic environment."

The full transcript from the Westminster Hall debate is at www.theyworkforyou.com/whall/?id=2014-04-02a.264.1

Deftford Dockyard decision

On 31 March the Mayor of London, Boris Johnson, granted approval of the planning application to redevelop the former royal dockyard in Deptford.

The 40 acreRoyal Scotia Wharf site was once home to a royal dockyard founded in 1514 by Henry VIII. The Mayor heard the views of the Build the Lenox community project, who wish to construct a replica of the seventeenth century warship. The Mayor said that the developer must fund a feasibility study into the Build the Lenox project to produce clear options about how it can be incorporated into the regeneration scheme. He also said that the developer should contribute towards the business case of whichever of these options is most feasible.

When England’s world power relied upon its navy, Deptford was at the heart of boat construction, exploration and royal might. It was the site where Sir Francis Drake was knighted by Queen Elizabeth I and where Sir Walter Raleigh is reputed to have laid down his cloak to prevent the Queen muddying her shoes.

Ahead of the mayor’s decision, the Council for British Archaeology (CBA) called for development plans to respect and integrate the surviving remains of the Dockyard in a proposal, in keeping with the scale and significance of the site.

CBA Director, Dr Mike Heyworth MBE said: “Deptford Dockyard has great heritage significance but today it lies almost forgotten, the poor relation of Greenwich further down the river which is by contrast a World Heritage Site. Yet without Deptford, Greenwich would not exist, and the physical remains at Deptford are extensive and significant.

“Deptford needs development to regenerate the area. Nobody is suggesting that the site of the dockyard does not have development potential. But we should fully understand the significance of the dockyard and its complete history and reflect this in the development proposals: using this potential as a catalyst for the regeneration.”

Welsh Heritage bodies not to merge

On 14 January John Griffiths, Minister for Culture and Sport in the Welsh Government, announced that Cadw and the Royal Commission for Ancient and Historic Monuments in Wales will remain separate organisations for the time being. “We will take forward the strategic planning process in collaboration with the sector as a whole, taking account of the helpful responses received from the consultation. This will provide us with a very effective strategic framework within which Cadw can use its sponsorship relationship with the

Royal Commission to ensure both organisations focus effectively on coherent and mutually reinforcing priorities, delivering strategic outcomes for the people of Wales. We will encourage the Royal Commission to develop non-governmental sources of income, many of which do not depend on charitable status being achieved and work with them to explore the scope and advantages and disadvantages for them gaining recognition as a charity. The extent to which they are successful in generating additional income could potentially help provide a basis to reconsider the options in the future. We will in addition work to safeguard the future of the Archaeological Trusts, which are such an important part of the sector in Wales.”

Cornwall and Devon News

Following its 2013 successful overseas tour to Chitena for the Denis Papin tercentenary celebrations, the Trevithick Society in its 79th year seems on the brink of having, for the first time, a Society headquarters with space for its remarkable collections. Fittingly, this will be in part of the former Holman Brothers site in Camborne. The Society has recently published definitive histories of Devon Great Consols Mine and Camborne School of Mines as well as a very popular small book on Trevithick and his engines.

Elsewhere in Cornwall, Geevor Mine was successful in the Cornwall Tourist Awards where they won two gold awards and a silver. Not content with this they then picked up a second prize in the Small Visitor Attraction category at the South West Awards.

At Hayle the Harvey’s Foundry Trust announced that it had been awarded £4 million from the Heritage Lottery Fund to conserve and adapt the two remaining Grade II listed buildings at Foundry Square, while Natural England and the Tregothnan Estate have announced a programme of much needed building conservation on the Wheal Busy site, following successful work last year at neighbouring Wheal Maid Valley Crofty.

Progress also continues at Porthcurno Telegraph Museum which should reopen this summer after major changes including a new building for the museum archive. This work has been aided by £100,000 from the DCMS/Wolfson Fund for Museum and Gallery Improvement.

On the debit side came depressing news from the much vaunted Heartlands site at Robinson’s Shaft, South Crofty, of staff layoffs, shop closure, unlet commercial units, a dearth of visitors and a £200,000 annual loss. Some of this had been predicted; the Heartlands project always seemed unsure of its role and purpose, consequently falling between the two stools of industrial heritage site and tourist attraction.

Also, in late March came the news that Poldark Mine, formerly Known as Wendron Forge, had gone into administration and was offered for sale at £350,000. Visitor numbers are said currently to be around 18,000 per annum.
On the River Tamar in December the historic Cremyll ferry boat MV Northern Belle was in collision with a Royal Navy landing craft. There were no injuries but the vessel, built locally as the steam ferry, Armadillo, for the Mount Edgcumbe Estate in 1926, was damaged and has been out of service ever since. It is to be hoped that this unfortunate incident will not end the Belle’s remarkable record of 88 years’ continuous service on the same route.

Her replacement at present is the fortuitously named MV Edgcumbe Belle, a mere stripling of 56 years; she was built as the Humphrey Gilbert for British Railways when they ran the Dartmouth to Kingswear passenger ferry and has since run in a variety of west country locations. She will find the Tamar waters familiar, as she was once the ferry to Drake’s Island when that fascinating site was open to the public.

Graham Thorne

King Edward Mine

King Edward Mine Museum was fortunate to receive grant funding, part of which was to be used to investigate the area around the old South Condurrow stamps engine house at the northwestern end of the site. The engine itself was scrapped before World War I and evidence of this can be seen today as part of the east wall. Its union with the north wall was demolished to gain egress. As was standard practice for stamps engines, the boiler house was attached to the rear wall of the engine house, initially housing one boiler. This proved to be inadequate and so the boiler house was extended to accommodate a second boiler.

As was standard practice for stamps engines, the boiler house was attached to the rear wall of the engine house, initially housing one boiler. This proved to be inadequate and so the boiler house was extended to accommodate a second boiler.

The archaeological dig has located the west, north and east walls of the extended structure and hopefully further excavation will uncover the whole layout. It is hoped that the boiler flues which ran beneath the boilers will still be extant.

Work is also being undertaken at the site of the chimney in the hope that the footings are still in place. This chimney is unusual in that it not only vented the boilers but also a Brunton arsenic calciner some one hundred and fifty feet to the south, the flue from which is clearly discernable for most of its length. As yet the flues between the boilers and the chimney have yet to be located, but when they are it will solve the puzzle of how they joined the later flue to the earlier one – or did they build a second flue?

On the east side of the boiler house, the firing end, a well preserved cobbled coal yard has been partly uncovered and work continues to determine its extent. In clearing the overburden from the coal yard many rivet heads have been discovered indicating that the two boilers must have been dismantled on site.

Kingsley Rickard

North West News

Carrock Mine

This mine in the valley of the River Caldew near Caldbeck is reputed to have been worked for Bismuth by German miners during Elizabethan times. In the 1850s it was worked for lead and copper by a Mr. Emmerson, who gave his name to one of the wolfram (tungsten) veins. It was this occurrence of tungsten ore that lead to the majority of the activity at the site during the twentieth century. After trials in 1901 the mine was taken over by a German company who worked it until 1912. A new company in 1913 built a processing plant but the mine closed in 1919. During the Second World War exploration work was carried out but little production occurred.

The mine re-opened in 1971 with another new processing plant; it closed two years later only to re-start in 1976 and to work through till 1981. The processing plant was eventually demolished and the main entrance pulled in. The mine is a scheduled ancient monument.

The site has recently been the scene of much activity with the Cumbria Amenity Trust Mining History Society (CATMHS) re-opening the level. A detailed archaeological survey has been conducted and the commoners have entered a Higher Level Stewardship scheme. Funding has been made available to conserve the First World War crushing mill remains. None of the above would have been achieved without support of the landowners, the Dalemain Estate.

Graham Brooks

2014 English Heritage Angel Awards

The 2014 English Heritage Angel Awards are now open for applications, with the award ceremony taking place at The Palace Theatre in London on Monday 3 November. English Heritage are looking for nominations for people who deserve recognition for rescuing our heritage.

The Angel Awards which will be of interest to AIA members are for:

• the best rescue of an industrial building or site
• the best craftsmanship by a trainee or apprentice employed on a heritage rescue
• the best rescue of a listed building or a scheduled monument

This year, English Heritage are particularly looking for exceptional trainees or apprentices for the Best Craftsmanship Angel. And across all the categories, they are asking people to let them know if there was anyone, aged 15-24 involved in their project who deserves recognition.

To be eligible for the Awards, the heritage site must be designated as nationally significant, and be, or have been, at risk from neglect or decay.

Your rescue project must have been completed since 2008 or currently be well underway. Google ‘English Heritage Angel Awards’ to find application form, or if you have any questions on how to apply, contact: angels@english-heritage.org.uk

The deadline for applications is midnight on Sunday 1 June 2014.

Former winners in the Industrial category include Malcolm and James Nattrass for their work on Low Silt Mine, Bishop Auckland, Co Durham in 2013 and, in 2012, Max Sinclair for his work on the Droitwich Canal.

The Low Silt Mine 2013 winner

Form er w inners in the Industrial category

include Malcolm  and James Nattrass for their

work on Low  Silt Mine, Bishop Auckland, Co

Durham  in 2013 and, in 2012, Max Sinclair for his

work on the Droitwich Canal.

Graham Brooks
PUBLICATIONS

Local Society and other periodicals received

Abstracts will appear in Industrial Archaeology Review.

Greater London Industrial Archaeology Society Newsletter, 270, February 2014

Hampshire Industrial Archaeology Society Focus on Industrial Archaeology, 81, December 2013

Historic Gas Times, 77, December 2013; 78, March 2014

ICE Panel for Historical Engineering Works Newsletter, 141, March 2014

Merseyside Industrial Heritage Society Newsletter, 330, January 2014; 331, February 2014; 332, March 2014

Midland Wind and Watermills Group Newsletter, 107, December 2013

Northamptonshire Industrial Archaeology Group Newsletter, 129, Winter 2014

North East Derbyshire Industrial Archaeology Society Newsletter, 53, February 2014

Scottish Industrial Heritage Society Bulletin, 69, December 2013; 70, March 2014


South West Wales Industrial Archaeology Society Bulletin, 119, February 2014

Surrey Industrial History Group Newsletter, 197, January 2014; 198, March 2014

Trevithick Society Newsletter, 162 Winter 2013

Triple News: Newsletter of the Kempton Great Engines Society, 46, Winter 2013/14

Yorkshire Archaeological Society Industrial History Section Newsletter, 90, Spring 2014

BOOKS


Originally published in 1988 this book is a detailed account of the author’s apprenticeship as a ‘fitter, turner and locomotive erector’ between 1946 and 1951. It is an authentic portrayal of a now vanished life. In the author’s words “It is not my intention to criticise, find fault with or poke fun at anyone or anything but to recall a time and place peopled by characters never to be forgotten by those who passed through one of the great railway workshops of the world during the long period when steam was king”.


In this book LA Summers investigates the facts behind the myths and mysteries using modern research and newly discovered information. What was life really like in the days of steam? Was GWR influence to be seen in parts of the world like Egypt, Malaya and Australia? The author paints a broad canvas putting Swindon in its British, European and world wide context.


In 1909, one of the world’s great cities, London, finally sanctioned steel-frame architecture. For the previous quarter century, a new structural material – steel – had been discreetly changing the anatomy and physiology of the capital’s new buildings, and shifting professional dynamics between architects, engineers and contractors. Contemporaries called it ‘The Age of Steel’, one noting ‘nowhere have the days of steel been more pregnant with change than in architecture and building’.

This richly illustrated book takes a new look at Victorian and Edwardian architecture, examining how mild steel – which superseded cast and wrought iron – was put to use in theatres, hotels, clubs, offices and many other building types. Interwoven are chapters examining technological developments, Continental and American cross-currents, legislative and philosophical precepts, and constructional and architectural consequences.

English Heritage is delighted to offer readers of IA News 30% discount and free post and packing (UK only) on this book (rp £75.00). Please telephone 01235 465577 or email direct.orders@marston.co.uk and quote reference number 7220140007 to take advantage of this offer. Offer expires 31 December 2014.


Bradshaw’s guide was published very shortly after the line opened. It goes beyond the engineering aspects of the line to record the sights to be seen in the towns and cities encountered along the route. Brunel expert John Christopher presents Bradshaw’s original text as a continuous journey from Paddington to Penzance. The text is accompanied by contemporary images as well as many new colour photographs of the same journey today.

Snowdonia National Park Centre

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23-25 MAY, 2014

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Tutor Dr David Gwyn

The course will examine the fascinating variety of workers’ housing in Gwynedd and the Snowdonia National Park, concentrating on those built for slate quarrymen and their families. We will be studying how rural/vernacular and standard British ‘two-up-and-two-down’ types are to be found together, and seeing how towns came into being where there was no earlier settlement.

Plas Tan y Bwlch, Maentwrog, Blaenau Ffestiniog, LL41 3YU

01766 772600 plas@eryri-npa.gov.uk

www.plastanybwlch.com

INDUSTRIAL ARCHAEOLOGY NEWS 169 23
7 June 2014.
The East of England Regional Industrial Archaeology Conference (EERIAC)

will be held in Sudbury, Suffolk on Saturday June 7, and will include lectures on the Stour Navigation and the Suffolk/Essex silk industry followed by a river trip and a walking tour of the surviving industrial remains. Cost £13.

Further details and booking form from David Alderton, aldertonaia@btinternet.com 01245 227588.

INSTITUTE OF AMERICAN CZECH HISTORY (EASTERN CZECH REPUBLIC),
16th Century Watermill, 18th Century Blast Furnace and many other historic sites
Details: industrial-archaeology.org/aoverseas.htm

7 June 2014
EAST OF ENGLAND REGIONAL INDUSTRIAL ARCHAEOLOGY CONFERENCE (EERIAC)
Sudbury Suffolk Details and booking form David Alderton, aldertonaia@btinternet.com 01245 227588.

19-22 June 2014
FIRST INTERNATIONAL CONFERENCE ON EARLY MAIN LINE RAILWAYS
Caernarfon, North Wales
www.earlymainlinerailways.org.uk

19-22 June 2014
INDUSTRIAL EXPLORER WEEKEND
Derby & the Derwent Valley
info@heritageofindustry.co.uk

14-18 July 2014
NEWCOMEN SUMMER MEETING
M4 Corridor
info@heritageofindustry.co.uk

5-10 September 2014
AIA ANNUAL CONFERENCE, CHESTER
industrial-archaeology.org – see page 13

September 2014
SIA FALL TOUR, COLUMBUS, INDIANA
A city noted for its top-name architecture and its production of diesel motors
Details www.siahq.org

22 November 2014
CELEBRATING SYMPOSIUM.
Wiltshire Archaeological and Natural History Society, Devizes Town Hall. Tel 01380 727369 wansh@wiltshireheritage.org.uk
See page 17

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

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1 April for May mailing
1 July for August mailing
1 October for November mailing

The AIA was established in 1973 to promote the study of Industrial Archaeology and encourage improved standards of recording, research, conservation and publication. It aims to assist and support regional and specialist survey groups and bodies involved in the preservation of industrial monuments, to represent the interests of Industrial Archaeology at national level, to hold conferences and seminars and to publish the results of research. The AIA publishes an annual Review and quarterly News bulletin. Further details may be obtained from the Liaison Officer, AIA Liaison Office, The Ironbridge Institute, Ironbridge Gorge Museum, Coalbrookdale, Telford TF8 7DQ. Tel: 01740 656280.

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