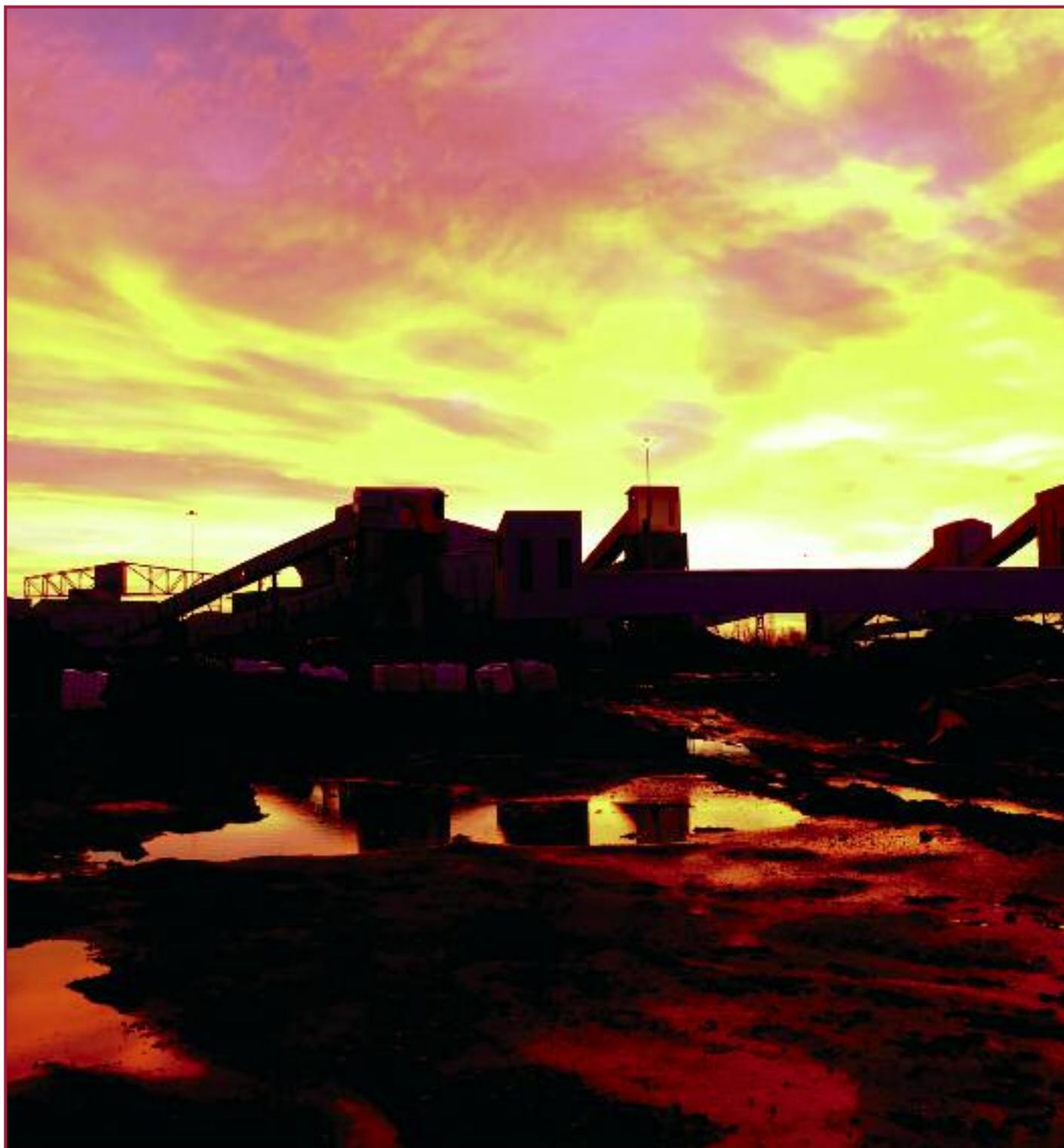


INDUSTRIAL ARCHAEOLOGY NEWS

177
SUMMER
2016

THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

FREE TO MEMBERS OF AIA



Restoration Grants • Lancashire Museums • Daniel Gooch
1929 NE Coast Exhibition • AIA 2015 report • Will's Cigarette Factory



INDUSTRIAL ARCHAEOLOGY NEWS 177 Summer 2016

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COVER PICTURE

Kellingly Colliery early morning on the mine's last working day 18 December 2015

photo Ian Castledine

From Maney to Taylor and Francis

As AIA members will be very aware, the firm of Maney of Leeds, with whom we set up a contract to publish the *Review* many years ago, and who subsequently also took over our membership administration, was sold in 2015 to the Taylor and Francis Group (hereafter T&F). To complicate matters till further, Taylor and Francis are part of a much larger conglomerate, Informa, described on their website as 'a leading business intelligence, academic publishing, knowledge and events business, creating unique content and connectivity for customers all over the world. It is listed on the London Stock Exchange and is a member of the FTSE 100. This is why the invoices you will have received for membership come from Informa UK and not from T&F.

Many of you will also be aware that the transfer from Maney to T&F has not been without its problems! We had no choice but to deal with T&F as our contract with Maney, which was handed over to T&F, has another year or so to run. AIA Council delegated negotiations with T&F to a small group consisting of the treasurer, secretary, the two editors of *Industrial Archaeology Review* and myself, since with Peter Neaverson I set up the original Maney contract. Negotiations have been protracted and our treasurer in particular has put in many hours of work dealing with individual AIA members and with affiliated societies who were having problems with their subscriptions. Originally, VAT was added to the electronic version of our journal but, as this was not made clear to start with, T&F have agreed to waive this for a year. However, but eventually we shall have to bear this cost and may have to increase subscriptions as a result. We sincerely hope that all the errors have now been rectified and the membership database used by T&F is now correct. It is obviously easier if you set up a direct debit to pay your subscriptions rather than do this by cheque.

Industrial Archaeology Review (IAR) will now be published under the imprint of Routledge, a

firm which is also part of T&F and so of Informa. This is good for us as Routledge have long been respected publishers of archaeology books – the book I wrote with Peter Neaverson, *Industrial Archaeology: Principles and Practice*, was published by Routledge so I am glad to know the name still exists. Under Maney, we benefited from *IAR* forming part of a package with other archaeology journals, MORE, which meant it was taken by academic libraries who might not have subscribed to it on its own. T&F have similar arrangements with their Routledge archaeology journals and so we hope to continue to benefit this way. They intend to undertake extensive marketing of our journal which will also be of benefit to us.

Journal publishing has moved into a world dominated by electronic access and we cannot escape this. Members have always had access to the electronic version of *IAR* and will continue to do so if they follow the instructions for online access which should have been sent to you from T&F. This involves the use of your email address and we hope that this will help AIA to build up a list of email addresses of members which will help speed up communications. Once you register with T&F online, you will have access to a wide range of electronic resources. The process of submitting articles or book reviews to *IAR* and checking proofs when articles are accepted will also become more standardised. T&F use a production system known as CATS – Central Article Tracking System – which generates author communications, copyright assignment forms and stores manuscripts and proofs. This will enable authors to access their articles quickly, as is required so often now for academic purposes. But don't stop submitting articles and book reviews as your editors and the book review editor will handle all this in the first instance and give you clear instructions on what to do.

*Marilyn Palmer
President and Book Review Editor*

Heavy costs of closure

The closure of the Snibston Discovery Museum, Coalville, which shut its doors in July 2015 after a legal challenge failed, exemplifies the heavy cost and losses associated with closure. The demolition of the Snibston site, is costing £179,625. The council will also have to pay back the £146,146 that the HLF invested in the museum and its collections. Moreover, redundancies that resulted from the museum's closure will cost £142,000.

The council's original plan was to sell the land to residential property developers, but the land has been deemed unsuitable for a housing development in its current state.

Brian Voller, the former chair of the Friends of Snibston, says: "In an area of significant deprivation, the Snibston Discovery Museum not

only provided economic benefit to the local community, but employment, volunteering opportunities and 'frequent-visitor' deals, particularly for local people. The workforce included staff and more than 40 volunteers, some of whom had physical, mental health or learning disabilities. On top of that, evidence shows that about 1,000 people, of all ages with registered disabilities, visited regularly with their carers."

The true cost of losing a museum is hard to quantify, but a spate of high-profile cases gives the sector a more vivid picture of what it means, not only in monetary terms, but also the loss of expertise and dedication of museum professionals and volunteers that have worked hard to protect and share the collections.

Restoration Grants – update on current projects

The current projects being funded by AIA restoration grants cover a broad spectrum of works being carried out on Industrial Archaeological sites and artefacts. Once again, our thanks go to our anonymous member who so generously provides the funding for these grants. We are currently considering applications for 2016 funding as applications closed on 31 March. For full details look at the AIA website.

Mark Sissons

At the Tramway Museum Society's Crich site work on consolidating the remains of a lead smelter on the edge of the museum has now been completed. Large amounts of undergrowth have been cleared and a new viewing platform and interpretive signs installed.



Thompson CK coach, North Yorkshire Moors Railway

The London North Eastern Railway Coach Association, which is based on the North Yorkshire Moors Railway, has now commenced work on Thompson designed type CK coach; timber has been sourced and work started on removing the rotten framing of this unique vehicle.

At the Isle of Wight Steam Railway the Ryde pier tram project has been delayed owing to the original restoration contractor unfortunately going out of business. A revised schedule has now been submitted to the AIA and work should commence soon.

Work on the Wappenshall Warehouses on the Shrewsbury and Newport canal is currently on hold. Following a successful HLF application they are still sourcing match funding before starting this project. Visitors to the 2016 AIA conference may choose to visit this site as one of the options on 10 September.

On the Kennet & Avon Canal the boiler feed reservoir at Crofton Pumping Station has been refurbished allowing the engine to be run as designed.

The Prickwillow Engine Trust in Cambridgeshire has now completed work on returning a Vickers Petter 2 cylinder engine to working order. Work funded by the restoration grant included re-machining the main bearings and installing new blow lamps that are used to start this engine.

The London Wildlife Trust at Hackney have done much work on the restoration of the gas house and other former water works buildings on this site and in April 2016 a formal opening will be conducted by Sir David Attenborough and other invited guests. See page 18



Salt wagon frame being restored by the Llangollen Railway Workshops

In Cheshire a salt wagon from the Lion Salt works has been overhauled and refurbished by the Llangollen Railway, a nice case of funding given to one heritage organisation being spent with another.

The Friends of the Thorpe Light Railway in County Durham are working on restoring the former Whorlton Lido 15in gauge railway and are now moving on to restore the locomotive Wendy and some of the coaches.

Down in South Devon the Stover Canal Trust are restoring a graving dock. The Stover Canal was built by James Templer of Stover Lodge between 1790 and 1792 to transport clay by barge between Teignbridge and Teignmouth. The canal was extended north to Ventiford beyond Teigngrace and subsequently connected to the Haytor granite tramway. Traffic on the canal ceased in the 1940s.

The North East Maritime Trust is working on the South Shields lifeboat *Henry Frederick Swan*. Restoration funding is helping to pay for the final fit out to complete the full restoration of this life boat which has been restored from a near derelict hulk.

At Dawes twine works at West Coker in Somerset, The Rope & Sail Trust have used AIA restoration funding to restore the oil engine and some of the rope-making machinery. This



Dawes Twine Works at West Coker

complements funding that was awarded to restore the building of this rare surviving rural rope and twine works.

In Alston the South Tynedale Railway has been given funding to convert and restore a former NCB narrow gauge tamping machine for use on the South Tynedale Railway. These machines were originally built for tamping underground track in coal mines and, with the end of deep mining in this country, few survived.



South Tynedale Railway Gullick Dobson tamper
Photos: Mark Sissons

In Dundee work on installing the Boulton & Watt rotative beam engine in Verdant works is now completed. With the project completed this will be the oldest steam engine installed in a mill in the world.



Boulton and Watt 1802 engine at the Verdant Works. Dr Karen Thompson working on valve chest



Planet wheel Photos: Mark Watson, Historic Scotland

Lancashire Museums – a temporary reprieve

As more and more cultural institutions around the UK fall victim to local authority cuts, the heavy cost of museum closure is starting to be fully realised. Last autumn we had news that Lancashire County Council was planning to close its museums including Queen Street Mill near Burnley and Helmshore Mills Textile Museum as well as the County Historic Environment Service. However, on 18 March it was reported that the council was delaying the closures until 18 September; this gave just six months to devise an alternative system for operating these world renowned museums.

Our chairman, Keith Falconer, had written in November:

"I am writing on behalf of the Association for Industrial Archaeology about the future of Queen Street Mill, Burnley, Helmshore Mill and the County Archaeological Service as the AIA understand that shortly Lancashire County Council will be considering closures as part of your response to funding issues. The AIA would wish to strongly object to any such closures.

"The AIA is the national organisation for people who share an interest in Britain's industrial past. It brings together groups and individuals with an interest and expertise in identifying, recording, preserving and presenting the remains of the industrial past. Uniting individuals, local societies, academics and field professionals. For more than 40 years the AIA has championed Britain's industrial heritage, collaborating with Government Heritage Agencies and the Council for British Archaeology, to train volunteers, assess the significance of historic industrial sites, to promote the detailed investigation and recording of industrial sites and to support efforts to sustain preserved historic industrial sites.

"The significance, regionally, nationally and internationally of the two museum sites is not in question – they are simply of global importance.

"There were 79,000 looms in and around Burnley in the 1890s. The Grade I listed Queen Street Mill is all that remains, the last working steam-powered weaving shed in the world. Built in 1894, its 308 looms today offer post-industrial audiences a vivid insight into the workings of a typical Victorian mill. Here is industrial-strength heritage at its most challenging – a site of world importance taking its chances in a climate of harsh economic choices.' We must not fail generations to come the opportunity of witnessing for themselves such a heritage.

"Similarly, Helmshore Mills Textile Museum is of great significance. The development from the early 1970s onwards of the two mills – Higher Mill built in 1796 and Whitaker Mill built in the 1820s and rebuilt in 1860 – as a preserved site, firstly by a trust and then by Lancashire County Council, was one of the flagship museum successes of its time.

"The AIA also views the proposed closure of the County Historic Environment Service as a very



Queen Street Mill, Burnley. The loom shed

worrying development. It raises a very serious question regarding what future provision the County intends to make for informed archaeological advice in the planning process, to meet the heritage requirements of the National Planning Policy Framework as these provisions are not a discretionary service. As so many of future planning applications will affect historic industrial sites the AIA would wish to be assured that the County will:

- maintain or continue to have access to a Historic Environment Record (HER) as required in NPPF;
- continue to hold evidence about the historic environment and industrial heritage assets in its area and that this will remain publicly accessible;
- continue to have access to appropriate 'expert advice' in order to fulfil the requirements of the NPPF;
- be able to demonstrate how it will ensure that all planning applications affecting historic industrial sites are monitored by a fully qualified and experienced archaeologist;

- ensure there is a system in place to ensure that the significance of industrial heritage assets is fully considered in the planning process.

"The Association fully understands the critical financial circumstances faced by the county council but is concerned that you do not take precipitate action before considering all possible alternatives for continuing public access to these two museums, safeguarding the collections and for the continuation of a viable Historic Environment service."

Sarah Hardy, of the Save the Mills campaign, a former employee of Lancashire County Council working at Helmshore Mills Textile Museum, said: "I don't know how you can teach your children about an area when there is none of its history left. It just becomes impossible. We are losing this area's entire heritage. There were about 3,000 mills in the east Lancashire area during the mid-1800s, and now we just have these two working ones left. If they go, then that heritage is completely lost forever."

'A problem shared is a problem solved' – how small voluntary organisations can share best practice in the industrial heritage sector across Europe

The E-FAITH organisation has nothing to do with religion! The acronym stands for the 'European Federation of Associations of Industrial and Technical Heritage', which is simply a network of like-minded voluntary sector organisations across Europe operating in the field of industrial heritage /industrial archaeology /technical heritage (the latter term is more widely used across Europe than the first two).

Kate Dickson

Network members include charitable trusts and non-profit organisations who aim to rescue redundant industrial buildings, run small independent museums, operate every possible kind of mill, keep steam engines and locomotives moving, and involve local people in understanding and participating in the industrial heritage and associated social history on which their community is founded.

E-FAITH organises a Technical Weekend each year, hosted by a different organisation or country. Weekends involve a 'conference' of short presentations from those attending, discussions around the year's theme, visits to industrial heritage sites, and much networking and socialising. The networking is important as E-FAITH's main purpose is to encourage the dissemination of best practice and the sharing of experience and ideas between organisations with similar objectives across Europe. 'Twinning' and collaboration in pursuit of EU funding for cross-European projects is encouraged. Having signed up to attend a Technical Weekend, participants receive regular email updates from the administrator and from fellow groups, especially via membership of the E-FAITH Linked-In group, sometimes with requests to participate in collaborative projects across three or more EU countries; more often just asking for examples of projects facing similar challenges, or seeking examples of good practice that may be replicated elsewhere.

E-FAITH was successful in its campaign to the Council of Europe to have 2015 declared as 'European Industrial and Technical Heritage Year'. Many activities, festivals and open days were held during the year, marketed under the '2015 Industrial Heritage Year' banner. Unfortunately the UK was a bit slow to pick up on this opportunity. The next Technical Weekend will be a celebration of the events of 2015. It will take place in Antwerp in Belgium from 17 to 19 June 2016. The venue is the 'Zuiderpershuis', a former hydraulic power station associated with the movement of cranes, bridges and locks in



Fondue on board chartered train, Neuchâtel, Switzerland 2013

Antwerp harbour, which has been converted into a cultural meeting place run by a non-profit trust.

The draft programme for the June Weekend has recently been published on the E-FAITH Industrial Heritage website. There will be guided visits to the Antwerp-South area (former dock and harbour area, quays etc) and to other industrial heritage sites in Antwerp, as well as free entry to a number of Antwerp museums. There will be discussions about how to build on the legacy of 2015, updates on the progress of two EU collaborative project applications that have been submitted under different funding programmes, and opportunities for up to ten groups to make short presentations about their project. To find out more about the Weekend search – E-FAITH weekend June 2016

One of the challenges of E-FAITH Weekends (or one of the fun things, depending on your perspective) is that those attending have to make their own travel and accommodation arrangements as well as organising their evening meals – although this usually simply means following the crowd to a local restaurant. English is the agreed language of the organisation and the Weekends, although it is sometimes fun to practise a bit of school French, German or Italian. If you are a linguist, please do volunteer to help interpret the presentations, papers and conversations at the Weekend.

Unfortunately, I am unable to attend the Technical Weekend this year, due to a family wedding, but I would be pleased to act as a 'conduit' for queries about it. My email address is director@creative-heritage.net. Alternatively, the E-FAITH administrator, Adriaan Linters, speaks fluent English (and several other languages) and would be pleased to respond to any enquiries directly: secretariat@e-faith.org.

3000 Tweets for the AIA

The AIA's Twitter account passed this milestone in March. Although a few dinosaurs will not be impressed, the AIA's twitters are proving to be an effective way of disseminating information to nearly 800 followers.

Congratulations to council member Tegwen Roberts who took on the responsibility for this initiative.

For anyone still nervous about dipping their toes into this other world, search – @AIndustrialArch – it's easy.

They are so impressed north of the border that they have now set one up there, search – @scotindustria

Report on the All Party Parliamentary Group for Industrial Heritage

The first meeting in this Parliament of the All Party Parliamentary Group for Industrial Heritage (APPG IH) was held on 8 March 2016. Although there were only two MPs, including the Chairman Nick Thomas-Symonds, and two Peers present, it was a good meeting with much discussion and ideas for the future work of the Group.

The chair is very keen that the group receives quality presentations, takes evidence about issues, produces reports and makes site visits/excursions. The meeting was reminded that at the previous meeting it was suggested that a presentation by HLF would be helpful and this was agreed. Miles Oglethorpe said that Historic Environment Scotland (HES) are promoting industrial heritage to MSPs, highlighting the values and benefits of industrial heritage in an Industrial Heritage Strategy. The chair felt that a concise document on the values and benefits would be a very helpful document for this group to produce for the whole UK and this was agreed as an action. The suggestion of an excursion to the King's Cross regeneration area was welcomed as a possible event for the autumn.

Chris Smith, Director of Planning at Historic England (HE) gave a presentation beginning with an outline of the role of HE following the division of English Heritage (EH) in 2015. He continued by describing the work undertaken by the former EH on listing and scheduling industrial heritage, guidance produced on assessing Industrial sites, and good practice examples of adaptive reuse of industrial buildings. He also discussed the recent significant decline in local authority staffing for conservation and archaeological services, and the impact of budget cuts on civic museums.

Sir Neil Cossons had sent his apologies but had also sent an email to the group regarding the situation with Queen Street Mill, Burnley and Higher Mill and Whitaker's Mill, Helmshore. This prompted Julie Cooper, MP for Burnley, to attend the meeting and there was discussion about this matter which had to be cut short owing to time constraints. Chris Smith reported that the Historic England Regional Director was meeting the County's CEO on the following Friday. It was agreed that the Chair would write to the county's CEO to express the APPG's concerns and encourage them to keep the museums open while negotiations with groups interested in taking them on progressed. This letter was sent before the meeting with Historic England. It has since been announced that the Mills will remain open to the public until September while negotiations on future management take place.

Dates have still to be agreed for future meetings and events, but hopefully the next one will be held between the date of the EU Referendum and the summer recess which starts near the end of July.

Tony Crosby

All Party Parliamentary Group Meeting for Civic Societies

Several members of AIA Council attended the All Party Parliamentary Group meeting for Civic Societies held at Portcullis House, Westminster, on 27 January 2016. Some of the main speakers gave us food for thought – the more notable ideas put forward, which may be of general interest, are outlined below.

Robert Carr

Deborah Lamb of English Heritage used a phrase which we might find useful – ‘the erosion of local character’. Ideally we want to prevent this, and at least reduce the rate of erosion.

Regarding English Heritage and the listing of buildings which are controversial – the kind of situation where many people might be tempted to mutter ‘what on earth did they list that thing for!’ Deborah explained that it is most important to list things which are controversial and unpopular. In fact it was a duty. If you have a building or structure on which simply everybody agrees it will survive anyway, the market will see to that. It is preserving something currently disliked and preventing the market destroying it that is the important role that English Heritage plays. English Heritage has to be cutting-edge, and list unpopular buildings and sites; it is their function.

The President of Civic Voice, the television celebratory Griff Rhys Jones, had an important message to put across. Griff gave a virtuoso humorous performance. Partially concealed within the humour was a very serious, well thought out and extremely well put-together argument. The essential gist of this was that Heritage is really about the future – rather than just about the past.

Griff pointed out that it is the strenuous effort of many people – objectors, NIMBYs and the like that has made Britain the pleasant place to live in that it is. Moreover it is only by continuing with this unremitting effort that we are going to have a country fit to live in for the future. He said that he became interested in heritage through his initial campaign to save the Hackney Empire theatre in East London. At first he thought ‘let’s get rid of all this awful red tape and go straight for it’. He soon learned how wrong he was. It was through his work with the Hackney Empire that he discovered that it is very important to get heavily involved in planning and legal work and it is this hard work that really does make the difference.

His main example was London: he talked about the intention to build motorways through most cities which at that time very much included London. London was going to have a motorway box, an inner ring road, with the motorway running through Belsize Park, just south of Hampstead.



Tottenham Court Road showing new-building line set back to allow for six lane motorway Photo: R Carr

He also told us that if you look at Tottenham Court Road you will see that the later buildings are set well back from the old building line – see photograph. This was done deliberately because the intention was to build a six lane motorway which would come in from the north and terminate at Centre Point. Because of the objectors this was never built, nor the motorway box, nor in fact any other of the motorways that were planned for London at that time.

Griff said that along the course of the proposed motorway box in London there lived many influential and relatively wealthy people, people who had access to the law and skills such as QCs. By their very vigorous hard work over a considerable time they actually prevented the London motorways being built.

He quoted examples from towns and cities where objectors in prominent positions who also had access to good lawyers were able to prevent the building of motorways through their towns. Because the Motorway Box and other bold motorway schemes in London were halted, London is now a pleasant place to live in. Much of this was familiar but it was very nice to hear it put together concisely in the way that Rhys Jones did.

In the cases where motorways were built through the town, these places are nothing like as good as they might have been. Maid Marian Way in Nottingham is a notorious example which cuts a devastating swathe through that city’s medieval history. Less than two years after the road was completed it was given a label that has stuck to this day – ‘the ugliest street in Europe’.

His serious argument, that Heritage is really about the future, we need to take on board.

Withdrawal of Private Member’s Bill

The Heritage Minister, the Rt Hon David Evennett MP, wrote to the Heritage Alliance on 4 March to confirm that a Private Members Bill proposed by Bill Wiggin MP has been withdrawn.

This is welcome news and follows action by the Heritage Alliance who wrote to the Heritage Minister to express concern at proposals to alter the principles on which buildings are listed.

Is this a blueprint for local societies to address local ‘Industrial Heritage at Risk’?

In their 50th anniversary year, the Merseyside Industrial Heritage Society was fortunate to have Sir Neil Cossons as a keynote speaker. He spoke of the importance of recognising what parts of their industrial heritage were in danger and what needed to be saved. The MIHS have drawn up a strategy to address these issues so that their members could make a real difference to the future of Merseyside’s industrial heritage.

Find out who is the local conservation officer for your area or borough. Is there a ‘local list’ of buildings under threat in your area? Volunteer to be the Society’s link for your area.

Try to spot potential buildings or structures at risk in advance so that there is time to do some research in case it needs to be saved.

Find out the name and contact details of your local civic society and find out if they are working on any local heritage campaigns.

Contribute information to the society about heritage at risk in your area, so that the MIHS can form a picture of what is happening in Merseyside.

Use the internet, check the English Heritage website, the local Heritage gateway and Historic Environment Record.

Look up local planning applications on your council’s website.

Keep an eye on newspaper reports on local schemes.

Find out the name of the local civic society in your area and ask to be on their mailing list.

Commission talks from local conservation officers and individuals with experience in saving heritage.

Liaise with other societies to share knowledge and gather expertise.

Daniel Gooch – Saviour of the Great Western Railway



Sir Daniel Gooch by Leslie Ward 1882

It was interesting to read Bruce Hedge's article 'Swindon 175', not just for its content but because it shows how local interest differs over a comparatively short distance. The borough of Windsor and Maidenhead are celebrating the 200th anniversary of the birth of Daniel Gooch, because his much loved country house and estate was situated in the borough in the small village of Clewer. It will

also be the 130th anniversary of the opening of the Seven Tunnel on 1 December 1886.

John McGuinness

Most of those who have heard of Daniel Gooch will know that he was the first locomotive superintendent to the GWR but are less likely to know of his involvement with the *Great Eastern* and the laying of the trans-Atlantic telegraph cables or that he rescued the GWR from near bankruptcy.

Daniel was the sixth child of John Gooch and Anne Longridge and was born in Bedlington, a town 12 miles north of Newcastle, where John Gooch was book-keeper at the iron works. A family friend was George Stephenson, who introduced young Daniel to both coal mining and steam engines. Just as Daniel left school his father fell on hard times and in 1831 moved to Tredegar where Daniel was to start his training in the large iron works.

Daniel's first job was in the foundry where he prepared the sand moulds for casting. After a short period of illness he moved to the carpenter's shop where he started by making patterns for the casting shop but progressed to building large timber roofs. It is clear that Daniel did not restrict his involvement to carpenter's work and would assist in the maintenance of the works machinery, when he had a number of lucky escapes, including being trapped in the cylinder of the blowing engine when the piston started to move. In addition he was allowed to study all aspects of the works, such as the refining processes. The Goochs left Tredegar in 1834 as a result of the failing health of John Gooch. Daniel considered his years there as 'by far the most important years of my life'.

Soon afterwards he got a job under Robert Stephenson at the Vulcan Foundry near Newton, five miles north of Warrington. At the Vulcan works Daniel worked in the fitting shop helping to put the locomotives together. On occasion he would go on to the line with the engines. After about six months Daniel again became ill and had to go home to recover. Once recovered, he was allowed to go to

James Stirling's Dundee Foundry where he was employed as a draughtsman. He took up this post in January 1835 at the age of 18. After a year in Dundee, he moved to Robert Stevenson's works in Newcastle as a draughtsman.

In 1836 Robert Stevenson's Forth Street works were considered to be the finest locomotive shop in the world. Daniel was lucky to be there when significant developments in locomotive design were taking place. The most interesting of these developments was in valve gear. An early commission in which Daniel was involved was for 6ft gauge locomotives destined for Russia. In view of his subsequent involvement with the Great Western Railway and its broad gauge, this is a remarkable coincidence.

By 1836 the rapid development of rail networks and the associated demand for locomotives was exceeding the capacity of the established locomotive works. In the autumn of that year, only a few months after starting work with Robert Stephenson, Daniel was made partner in a new company to make locomotives, where he was to be managing engineer, at the age of 20 in March 1837. In May Daniel got a job under his brother Tom, who was Joint Principal Engineer on the Manchester and Leeds Railway. He was not to stay in this post very long for in July he was applying to Brunel for the post as manager in an engine manufactory to be erected near Bristol. Brunel met Daniel for the first time on 9 August 1837 and offered him the post of locomotive superintendent to the GWR. He took up his new role just 5 days later.

Brunel's highly optimistic target was to open the first section of the railway by the end of the year. At that time there was no finished track or any locomotives. A number of locomotives had been ordered from various manufacturers and each manufacturer produced its own design. Worse still the specification, by limiting the major features such as boiler pressure, traction force, weight, etc. led to locomotives which were severely under powered, the only exception being the locomotives supplied by Robert Stephenson. These had been intended for the New Orleans and Carrollton Railroad for 5ft 6in gauge, developed from Daniel's design for the Russian order.

Daniel had to lay out his engine house, order equipment and recruit staff, as well as progressing the manufacture and delivery of the locomotives. The main facility was to be at Paddington. The heavier *North Star* and *Morning Star* from Newcastle were delivered to Maidenhead by river and hauled up to Taplow, the terminus for the first stretch of line.

The early days were fraught with problems. Once *North Star* was on the track it was found that not enough allowance had been made between the flanges of the wheels and the edge of the rail. To rectify this problem the rails were respaced at seven feet and a quarter of an inch. Although the first locomotives performed well Daniel set to work to improve their performance. Right from the start he took steps to standardise

the component parts of his locomotive fleet, in many cases providing templates for the manufacturers.

The opening ceremony to Maidenhead was on 31 May 1838 with normal passenger services starting on 4 June. From the start he had problems with breakdowns leading to an unreliable service. Soon a pattern began to emerge. *North Star* and the six Vulcan Foundry engines were the only ones that he could trust. The valve gearing of the Mather, Dixon locomotives was so weak that they broke down every few miles. *Thunderer*, *Ajax* and the Haigh Foundry engines were too feeble to work the trains and the slide valves of the Sharp, Roberts engines either stuck or leaked steam furiously. "The result," Gooch complained, "was I had to begin to rebuild...one half of the stock".

The performance of the locomotive stock was so poor that in January 1839 Daniel was required to prepare a report for direct submission to the directors. Listing the defects he stated that: "All the problems stem from poor design or manufacture". By the end of the month Daniel was about to order a further 20 engines for which he was 'making out drawings complete'. By this action he was taking full responsibility for the design and ensuring interchangeability of the main components. He designed two classes of locomotives each with six wheels; the *Fire Flies* which had 7ft. driving wheels and *Suns* with smaller 6ft. wheels. To ensure consistency Daniel provided full specifications, drawings and for certain components, iron templates. These designs proved successful and eighty-three of these two classes were eventually built. Daniel served the GWR as locomotive superintendent for 27 years, resigning in 1864.

For a while his attention was focussed on the extraordinary achievement of laying the first successful trans-atlantic cable (for which he was made a baronet) but meanwhile the GWR was in trouble. Poor management and banking failures had brought the company close to bankruptcy; the GWR turned to Gooch for assistance and elected him as their new Chairman.

While Daniel's achievements as locomotive superintendent are well known his direct intervention in saving the company from receivership in 1866 and its subsequent recovery is hardly recognised. In 1866 the GWR had to repay some of the £1,400,000 of debentures as well as £1,300,000 of temporary loans. After unsuccessful attempts to raise money from the public or to borrow from the government, Daniel persuaded the shareholders to pay the dividend in 6% preference shares.

As a result of his rigid economies dividends rose steadily and in 1871 he was able to announce the highest dividend since 1853. That this recovery was due to Daniel was evidenced by the passing of a resolution awarding him a testimonial of 5,000 guineas.

Daniel died in October 1889, still as chairman, after nearly 52 years with the company.

The 1929 North East Coast Exhibition of Industry, Science and Art

During the summer of 1929, a great exhibition was held on the Town Moor in Newcastle-upon-Tyne in the area known as Exhibition Park (named after the 1887 Jubilee exhibition) which attracted over 4.2 million visitors when the population of Newcastle was about 325,000. Souvenirs from the exhibition are a valuable source of information using the technique of 'artefact as interviewer'.

Bill Pickering

The exhibition's primary purpose was to showcase the potential of the north-east coast's heavy industries such as engineering, shipbuilding, bridge building and mining, and in doing so attract orders for future work and to capitalise on signs of economic recovery following a downturn in post-first world war trade. The exhibition was intended to send out a message that the industry of the north-east still had formidable strength within the economy of Great Britain, this in spite of foreign competition and a decline in orders for its staple industries of coal, steel and ships. Invitations were sent out to companies across Britain and the Empire inviting them to exhibit but it was always the intention that the majority of firms would come from the land between the rivers Tweed in the Borders and the Tees in Cleveland.

The organisers were led by the Mayor of Newcastle-upon-Tyne, A.W. Lambert, who appointed C.P. Hainsworth as general manager. Hainsworth, a veteran of over forty previous exhibitions, widened the appeal of the event to the general public by organising additional



Aerial view of 1929 exhibition site

attractions including a fun fair, a sports stadium, an African village and the sale of souvenirs.

Although the exhibition's original purpose of bringing orders to north-east industry was proclaimed a success at the time, there is little independent evidence to support this. Three days after the exhibition closed on 26 October 1929 the New York stock exchange crashed and any benefits to north-east industry that the exhibition accrued were in all probability lost. That the exhibition was a success from a public morale point of view is without doubt, with attendance at over 4 million and the event making a profit.

The exhibition was financed by a loan taken out by Newcastle Corporation guaranteed by commercial and civic organisations. All the local authorities in the region made guarantees with the exception of Sunderland (the Corporation's attitude was not in step with the industry in the area, as many companies from Sunderland exhibited at the exhibition). Several companies invested heavily as they perceived it to be in their interest. Individuals also contributed amounts from £1 to £100, such was the public attraction. The total was over £173,000.

By 1929 the organisation of exhibitions had become professional and to a large extent standard. The principal buildings of the exhibition were the Palaces of Industry and Engineering. The Palace of Engineering housed the exhibits of the region's large manufacturing companies; among the many were industrial giants such as Vickers Armstrong, William Doxford and Sons Ltd., Parsons, Swan Hunter, Clarke Chapman, Dorman Long, and Imperial Chemical Industries. The companies presented display stands on manufacturing processes including steel production, mining, shipbuilding and marine engineering, turbines, bridge building, and electricity generation.

The Palace of Industries was the largest building on the site. An extra 60,000 square feet of floor space was added to the original plan following demand. Despite the additional space more than one hundred applications for exhibit space were turned down. The industries building housed well-known northern companies such as Maling (pottery), Davidson Glassworks, and Jobling and Son, the manufacturers of 'Pyrex'.

Other buildings included the Palace of Arts, which lodged a collection of art and sculpture borrowed from some of the north's great collections. This building is listed and the only survivor of the exhibition (it was formerly the city's Science Museum before becoming a military



Stands at the exhibition

vehicle museum; plans are now being finalised for its conversion into a microbrewery). The British Empire Marketing Board's pavilion (the only building paid for by the government) hosted displays of produce from Canada, Australia, Ceylon and Mauritius among others. There was an elite, members only, Garden Club and a Women's section building that provided displays coordinated by organisations such as the Women's Institute. A festival hall provided a venue for concerts and conferences and a sports stadium with a capacity of 20,000 held a multitude of sporting events and pageants over the course of the summer.

The 'African village' was also a popular attraction along with the amusement park. The display of ethnic peoples in 'ethnographic' displays was a standard component of most exhibitions of the time. For a small extra charge visitors could walk past the African village and watch the 'natives' perform dances and observe such activities as basket making and what purported to be daily life; the 'Africans' in this case were of Arab origin.

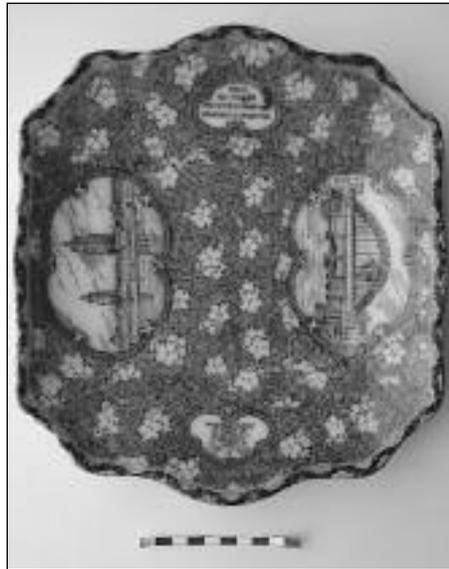
The exhibition organisers were aware of the value of souvenir sales and made sure that there were ample stocks for the public to purchase at reasonable prices. These souvenirs and items of ephemera have contributed greatly to the memory of this largely forgotten exhibition.

The main revenue for the exhibition was rent for exhibit space and visitor receipts. Rent paid in advance by exhibiting companies meant that some income could be used to pay off the loan or used to assist with the cost of extra buildings, kiosks and building improvements. Visitor receipts were used for day-to-day expenses after the event went 'live' on 14 May 1929.

Souvenir sales contributed a minimum of £6.1m at today's prices which contributed significantly to the success of the exhibition and the small profit that was generated. It was also of huge benefit to the companies responsible for the manufacture and sale of various souvenirs and ephemera.

We are fast approaching the time when the exhibition will pass from living memory. Families have to deal with deceased relatives' property and such items as exhibition souvenirs and ephemera of which they know little or nothing are often thrown away being perceived as having no value. The number of souvenirs surviving from the exhibition diminishes every year. Those souvenirs that are sent to dealers or sold on eBay are given monetary value and are vital to the long-term memory of this event. By becoming part of a collection they are protected and the long-term memory of the event is safeguarded and even enhanced. Dealers receiving an artefact from the North East Coast Exhibition may research the event and place a short history alongside the item. This research plays a part in raising awareness. People are more likely to learn about the event by seeing a souvenir for sale than by any other means. With each artefact comes further knowledge of the exhibition and possibly a desire to learn more.

Unfortunately, the study of the 1929 North East Coast Exhibition is hampered by a lack of



Souvenir Plate from Mailing Pottery, Newcastle upon Tyne

first hand interviews with organisers, staff and participants. The asbestos materials used in the construction of the buildings (all of the buildings with the exception of the palace of arts were demolished after the exhibition closed) have left a site that cannot be archaeologically excavated with any degree of accuracy or completeness.

There is an urgent need to locate and interview any surviving exhibition visitors to record their experiences of anticipating and then attending the event. Finding the location of artefacts from the exhibition and their current owners should be another priority, in order to conduct interviews using the 'artefact as interviewer' method to elicit further information from the artefacts.

Pioneering efforts by Jones and Russell (2012), Casella (2012) and in particular, experimental work conducted by Webster, Tolson and Carlton (2014), has resulted in the concept of the 'artefact as interviewer'. This concept involves allowing a group of people to see and touch artefacts from an assemblage with which they have a connection, and allows them to conduct free, unprompted, discussions amongst themselves about the objects. During the discussions, knowledge, memories and experiences are recalled. The process is recorded both orally and visually. The resultant record reveals information about the use of the artefacts by them and earlier generations, providing evidence of both social history and the artefacts' biography.

Bill Pickering is a student at Newcastle University studying Historical, Industrial and Contemporary Archaeology, with a particular interest in the world-wide exhibition movement. He has a special interest in artefacts from the North East Coast Exhibition of 1929 and the concept of the 'artefact as interviewer'. Bill was the recipient of a Peter Neaverson travel bursary in 2015 enabling him to attend an oral history course in London.

The British Archaeological Awards

The Annual General Meeting of the British Archaeological Awards (BAA) took place on 9 February this year. There were large numbers of apologies. Owing to the present situation of financial austerity, people now labour under severe financial restraint. Persons in paid employment in the heritage sector are often no longer in a position to attend meetings such as this AGM. Travelling expenses are now severely limited and workloads have increased greatly to the extent that almost no time is available for meetings. We did however have enough present to be quorate.

The chairman, Deborah Williams of English Heritage, reported that a holistic review of the BAA had taken place. A workshop had been held in July. The main issue of concern is finance – the BAA had spent £5,840 in 2015. The workshop had cost £4,000. A contribution of £3,000 had been received from English Heritage and a further £2,000 was due from Historic Scotland. The good news was a legacy from Professor Mick Aston of £8,110. This is a very generous amount and moreover there are 'no strings attached'.

Deborah Williams is to remain as the chairman and the officers will stay the same. It was decided that the chairmen of the judging panels should now be trustees.

The 2016 Awards Ceremony is to be held on Monday 11 July at the British Museum in London. One of the key events of the archaeology calendar, it also marks the launch of the Council for British Archaeology's annual Festival of Archaeology, with more than 1000 events attended by over a quarter of a million people.

Robert Carr

A warm welcome to:

Joe Burgess, London
 Donna Carmichael, Toronto
 Graham Gladden, West Kirby
 Roger Grimshaw, Rossendale
 Joe Raine, Telford
 Norman Smith, France
 Maryann Soper, Barnstaple
 Timothy Stevens, Deeping St James
 Richard Vernon, Hove
 Anthony Walsh, Stony Stratford
 who have recently joined the Association

and to:
 Eilean Glas Trust, Isle of Scalpay
 Macclesfield Silk Heritage
 who have joined as Affiliated Societies

The Wills Cigarette Factory, Bristol

Health concerns may have forced cigarette manufacturers to wrap their products in anonymous packages to be sold from shuttered cupboards but there was time, not so long ago, when these businesses were proud and flourishing concerns and, perhaps, advertising agencies' most valued clients – see IA News 176 p 7.

Robert Carr

The business of WD & HO Wills originated in the late eighteenth century from tobacconist shops and various relatively small premises in Bristol. Over the years this business prospered sufficiently for larger premises and small factories to be acquired. In 1861 the first steam engine was installed in a factory at Redcliff Street. A variety of products were made from imported tobacco but cigarettes did not make an appearance in Britain until relatively late in the nineteenth century. Wills introduced machine made cigarettes in the 1880s and the popular Wild Woodbine brand first appeared in 1888. In 1901 Wills joined seven other British manufacturers to form the Imperial Tobacco Company, but the popular Wills brands were retained.

As photographic evidence clearly shows, cigarette manufacturing in Bristol was labour-intensive and by the mid twentieth century becoming outdated and in about 1967 the decision was made to move production to a large new state-of-the-art plant to the south of Bristol, at Hartcliffe. Leading American architects, Skidmore, Owens & Merrill (SOM) were commissioned to design 'the latest thing' – inspired by the work of Mies van der Rohe – 'less is more'. This was business prestige writ large. As well as SOM, the British architects, Yorke Rosenberg Mardall, were also involved as well as the structural engineer Frank Newby.

Planning and construction of the new factory took until 1974 when the production of cigarettes started. Unlike the old factory in Bristol the new plant appears to have been highly automated and could produce 400 million cigarettes a week. It was the largest cigarette factory in Europe and of course the most modern. A separate five storey office building, on a two-storey podium bestriding an artificial lake, housed a workforce of 4500 with generous facilities such as a restaurant, bank, post office and theatre. Established artists were commissioned to provide works for display within the building.

However, the mighty factory only worked for 16 years; Wills were taken over in 1990 and production moved elsewhere. It was hard to find new uses for the factory which was finally demolished 1997-8 and the site is now a retail facility, Imperial Retail Park.

The office block became derelict and the cladding, involving Cor-ten steel with a design life of 800 years, was stripped off. Eventually the gutted remains consisted of little more than a rectangular framework. In May 2000 English Heritage listed this ruin grade II: a new use had to be found. Since 2003 architects Urban Splash



Wills factory when still in production

have been converting the office building into 422 apartments and people are already living in stylish new accommodation. Before 1973 energy was comparatively cheap and in those days little attention was paid to heat loss - in practice heat just poured out of the building. In the present conversion heat insulation has been of paramount consideration and there is large-scale use of geothermal energy.

Now known as Lakeshore after the celebrated 26 floor apartment towers of that name by Mies van der Rohe in Chicago, the exemplary repurposing scheme at Hartcliffe on the outskirts of Bristol is a gated development with its own lake, providing 422 eco apartment homes of varying size. The building itself is essentially a new construction on the framework of the old Wills offices, built in pastiche to resemble what was there previously. There have however been changes; a central portion now rises up above the original roofline to accommodate an atrium. This provides access to the apartments from the interior.

In 2000 the listing criteria outlined by English Heritage noted that the site was significant in the evolution of American office building in Britain and that American firms, SOM in particular, offered a quality of finish and ruthless attention to detail not found in contemporary British work.

Bus stops

Bus stops can be important as heritage: in 2007 a bus shelter at Dunchurch in Warwickshire was listed grade II. In July 2014 the old bus terminus on Station Square Milton Keynes, designed by Derek Yeadon, was listed grade II. About 15 years ago a listed bus stop, a shelter linked to the Wills complex, was removed from the site at Hartcliffe, and unfortunately it appears to have been mislaid. Hopefully it has been put in put in store but its location still remains to be discovered. As the recent book *Soviet Bus Stops* by Christopher Herwig exemplifies this is a matter of some concern.

[The thatched bus stop at Dunchurch, then in a poor state, was to be demolished until it was pointed out that it had been built as a war memorial, hence the listing - Ed]

UK Museums could lose out

"UK museums could lose out if the UK votes to leave the European Union (EU)," says the Museums Association's (MA) policy officer Alistair Brown, pointing to funds for research, projects and cultural regeneration in deprived areas.

"There are two issues at stake here for museums," says Brown. "The first is the simple transactional calculation of what British museums get out of the EU, and what the impact on culture might be if we were to leave the EU.

"While most funding comes from domestic sources, large chunks of research and project funding come from the EU, along with regional development funds which support cultural regeneration in deprived areas. It seems unlikely that the government would invest more in culture if we left the EU, so the risks of leaving seem high".

The paper, a response to the government's *Review of the Balance of Competences between UK and the EU: Culture*, also stressed that EU funds "provide a structure and scale which an individual member state could not replicate", while tourism from the EU to the UK and international recruitment was made easier by current visa agreements.

The paper also points to European structural funds having a significant influence on the UK museum sector in terms of culture-led regeneration. It cites the building of the Imperial War Museum North in Salford Quays, Manchester, which received an £8.9m European Regional Development Fund grant, and opened in 2002.

But, it says: "many find EU funding complicated", although "the fault [for this] lies not with the programmes themselves, but in the way the information is disseminated back to potential applicants".

For museums across the UK that are currently bidding for EU funding, the future of those funds, for research, projects, and structural development, is uncertain.

Simon Brown, the artefact loans officer at Nottingham City Museums and Galleries and the MA's East Midlands representative, echoes Brown's sentiments: "I really do feel that the referendum is an opportunity for us to show a global perspective and the benefits of being outward-looking rather than insular.

"Museums can and must do that, and I hope we can show some leadership in that regard. It's difficult to do any particular programmes at such short notice though."

**VISIT THE AIA
WEBSITE**

www.industrial-archaeology.org

Dr Edwin Course 1922 – 2016



Edwin Course was born on 15 December 1922 (as he always pointed out 'pre grouping'), the son of Captain Alfred Course, a master mariner, who later became a dockmaster and author on maritime topics. Edwin's mother was Alice and he had one sister, Pamela, some years his junior.

Edwin grew up in Tilbury, Essex and London. During his childhood his interest in transport developed, encouraged by his father's career, and this was to be a central focus of his life. His views were also influenced by his boyhood in the great depression. He (just) remembered the General Strike – when his father drove buses, but Edwin's indignation was reserved for the troops billeted in the docks, who mixed their cocoa in his baby bath and scratched the surface!

In the second world war, he served as a petty officer in the Royal Navy, primarily on corvettes like HMS Kingcup, in the North Atlantic. It has to be said that this was not a time Edwin recalled with affection, partly because of the privations, but also because he did not find the navy to his taste. With his interest in classical music, his nickname was 'Prof' and he was fond of quoting one of his fellow sailors as declaring that Beethoven was 'bloody tripe'!

After the war, Edwin undertook various day jobs, including teaching, while studying in the evening. He gained a PhD from the London School of Economics. Some of the extra jobs he took brought him into contact with the greatest passion of his life – the railways. He told tales many years later of his time operating a tea trolley on Victoria Station, and how he found his attention wandering from the customers to the trains.

In 1956 Edwin's life changed dramatically when he was appointed to the staff of the University of Southampton. Here he spent the rest of his career. His subjects were transport studies and industrial archaeology, and it was at this time that Edwin started to build his remarkable slide collection, which very recently has been taken into the care of Historic England.

In the 1960s, Edwin's evening classes in industrial archaeology began. These soon gained almost cult status, and led to the establishment of the Southampton University Industrial Archaeology Group, the forerunner of HIAS (Hampshire IA Society). At the same time, the

Department of Extra Mural Studies (later the Department of Adult Education) started to run annual weekend and week-long residential courses. These 'field trips' continued for almost 40 years, and covered most of the United Kingdom. Literally hundreds of people went on the trips over that time, and they even attracted students from other parts of England and Belgium. At their peak, more than 50 would take part – as many as could fit on a coach.

Meanwhile, the SUIAG met monthly, published many books, a newsletter and a journal, as well as undertaking surveys of everything from breweries and brickworks in Hampshire to farmsteads. The Hampshire Farm Buildings Survey was a major enterprise, and the completed work was deposited with Hampshire County Council. It is still available to those interested in the topic.

The SUIAG's practical work was also pioneering with a highlight coming in 1985 when a domestic brewhouse at Southwick was restored and a brew undertaken. A number of offshoot groups developed to follow specific projects and enthusiasms.

Edwin continued to work at the university, not just in adult education but also in the departments of archaeology, civil engineering and mechanical engineering. He had been active in IA at regional level through the Council for British Archaeology and nationally, through the Association for Industrial Archaeology and transport related bodies like the Railway and Canal Historical Society. He also maintained an interest in local transport related societies, such as the Society for Nautical Research (South) and the Gosport Railway Society. He was a Fellow of the Chartered Institute of Transport and for many years active in the OTTS (Organisation of Teachers in Transport Studies) and the TSSA (Transport Salaried Staff Association).

However, Edwin's interests were wider than IA and transport, and he served as President of the Hampshire Field Club and Archaeological Society and as editor of the Portsmouth Papers. He was also wrote numerous articles and a number of books, and was involved in media work – TV, Radio, and films. His books included three volumes of Railways of Southern England, Railways Then and Now, London Railways Then and Now and The Changing Railway Scene in Hampshire (with Pam Moore).

Among the projects which featured large in Edwin's life was the restoration of the Edwardian Water Pumping Station at Twyford. His efforts resulted in its being Scheduled, a remarkable achievement.

Until recent years, when ill health has prevented him doing so, Edwin continued to be active, lecturing and writing long after his retirement. He found great personal happiness with his wife, Catherine, and children from his previous marriages – Martin, Rosalind and Magnus. He had four grandchildren. After many years of declining health, he passed away on 16 February 2016 at the age of 93.

Pam Moore

The last deep coal mine in Britain

More than three thousand people united in a march on 19 December 2015 to mark the closure of Kellingley Colliery's mine in North Yorkshire and the end of British deep coal mining.



19 December 2015

Families, children and miners from around the country joined the march – which followed the mine's final working day – from Knottingley Town Hall in West Yorkshire to the Kellingley Miners Welfare Social Club.

Exploratory boreholes sunk in the 1950s established that there were up to seven workable seams of coal. The sinking of its two shafts started in 1960. Because the sandy and porous geology down to about 600 feet (180 m) was waterlogged, boreholes drilled around each shaft site had sub-zero-temperature brine pumped through them to freeze the ground. Once the shafts were sealed with a concrete lining the cooling brine was stopped and the frozen ground allowed to thaw.

The colliery began production in April 1965. Many of the miners came from Scotland to work at the colliery, having lost their jobs at Scottish pits that closed in the 1960s.

Kellingley's two main shafts were almost 870 yards (800 m) deep. One was used to move men and materials, and the second to move coal from the Beeston seam, at a rate of up to 900 tonnes an hour.

Seventeen people were listed on the memorial to people who died during the operation of the mine.

The shafts of the colliery will be emptied of cables and ropes and then filled with a concrete block about ten metres deep before the surface buildings are demolished.

Kellingley had not run out of coal but the imminent closure of Ferrybridge C, its primary customer, and fierce competition with global prices at their lowest level since 2008 and forecast to slump a further 25% by 2020, was too much.

In 1947 the British collieries were producing 187m tonnes from 958 deep mines and employed 718,000 workers. In 1965 output was 177m tonnes but by 1995 the number of deep mines was just 16, employing barely 1,300 miners. Now there are none.

Yorkshire Industrial Heritage On-line

Yorkshire Industrial Heritage On-line is a new web based database that has been created by members of the Industrial History Section of Yorkshire Archaeological & Historical Society (YAHS) in order to satisfy:

A desire to make information on local heritage sites available to the public.

A recognition that much existing paper material held by societies in local libraries could become inaccessible should they close, and a wish to make available individual research records and photographs that are at risk of being lost.

An appreciation that web publishing is very much cheaper than paper publishing and that a database can be readily expanded and kept up to date.

Dr John Suter

Launched in January 2015 and modelled closely on the IRIS recording system, the YIHO software is a simplified, open source, web based, geographical information system that is intended to allow non-expert users either to add data, images or documents to the database or to search for specific sites or categories of sites.

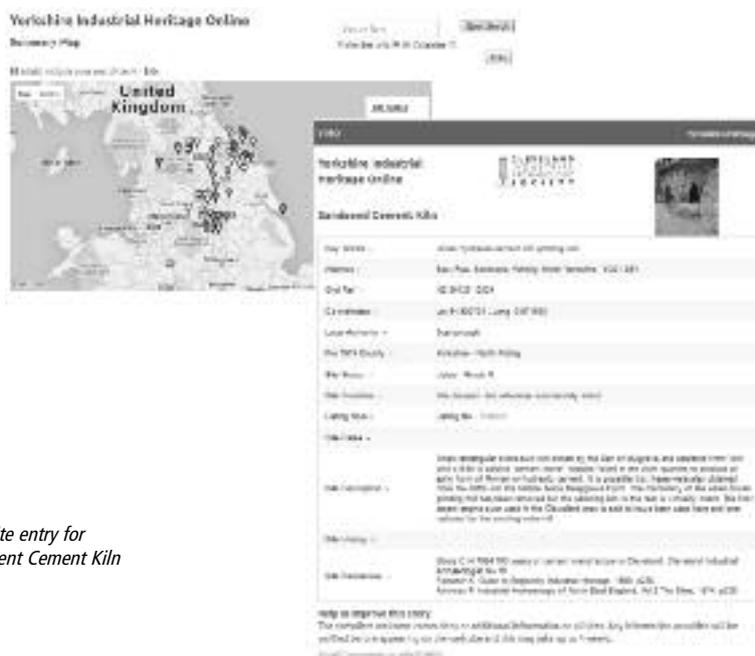
While it is acknowledged that a number of other websites such as those maintained by Historic England, the Archaeology Data Service and the Historic Environment Records provide valuable information, this is principally on sites that have statutory protection. These sites do not however allow private researchers to record information or photographs or allow the direct input of data by members of the public. Similarly, despite extensive enquiries within the industrial heritage community there is no evidence that any other society has developed similar web based software, although some do maintain lists of sites.

Now after some 12 months hard work the YIHO project has become an active collaboration which includes the Cleveland Industrial Archaeology Society and the South Yorkshire Industrial History Society and eight local history groups. Collectively these groups have added some 2400 records to the database and efforts are on-going to expand this. In building the database particular emphasis is being placed on the many smaller sites that have no statutory protection and sites that have been demolished, as such sites are generally not documented elsewhere. The project team has also adopted a very broad definition of Industrial Heritage which encompasses any industrial activity including domestic, agricultural, extractive and manufacturing industries from pre-Roman to modern times.

At present we envisage that YIHO will be publicly available from late summer 2016. However, if you wish to preview the site it can be accessed at <http://www.industrialhistory.yas.org.uk/yiad/> where the 'public search options' can be explored. For example to search for any records of kilns in the database enter 'kiln' in the Quick Search box (on the upper right side of the home page) and click the Quick Search button. Search results are displayed on Google Maps (see below). Clicking on a site marker opens a new window with a detailed description of the site. The detailed listing for Sandsend Cement Kiln is shown below by way of example.

As a project team we would be very interested in hearing from any other societies who are developing similar systems or who simply wish to know more about what has been a very rewarding and successful collaborative project. The project team can be contacted using the Contact Us button on the YIHO home page or via the YAHS Industrial History Section —

email: industrialhistoryvicechair@yas.org.uk



Website entry for Sandsend Cement Kiln

Peter Neaverson's Legacy



Peter Neaverson demonstrating the use of a plane table to University of Leicester students Photo: Marilyn Palmer

Peter Neaverson, who died in 2004, was a very active member of the AIA, serving as joint editor of Industrial Archaeology Review for many years alongside Marilyn Palmer, with whom he also wrote several highly-regarded books on industrial archaeology. Peter left a substantial legacy to AIA in his will, to be used to fund awards to promote the study and dissemination of the subject.

The first scheme to take advantage of Peter's legacy was the Award for Outstanding Scholarship in Industrial Archaeology; this is given each year to the authors of works judged to have made the greatest contribution to the subject. The award has proved very popular, not just with the authors themselves, but also with their publishers, who frequently include details of the award in their publicity material. Up to 2015, the works of nine authors have been recognised through this award.

The next award established to make use of Peter's legacy was the Travel Bursary, which provides contributions to the expenses of students, researchers and staff who work with industrial heritage to make study visits or attend training courses or conferences. So far seven individuals have received support for their work through this scheme; summaries of their work are generally published in *IA News*.

The latest scheme to benefit from Peter's legacy is the Digital Initiative Award, launched in 2013, which rewards excellence in the production of web-based or other digital resources to present or interpret industrial archaeology. This is an area of work which is growing in importance, with several brilliant animations of lost or inaccessible industrial sites already recognised.

Details of all these awards can be found on the AIA web. Peter's generous legacy should allow these awards to be sustained for at least a further ten years. However, there are many other aspects of industrial archaeology which the AIA could promote and support if it received further legacies like Peter's. If any members would like to discuss the possibility of remembering AIA in their will, and establishing a lasting legacy in their name, they should contact the treasurer, John Jones, by e-mail at treasurer@industrial-archaeology.org or by post at Hines Farm, Earl Stonham, Stowmarket, Suffolk IP14 5HQ.

Ian West

The Kirkaldy Testing Museum in action

On Thursday 10 March 2016 a group from the Institute of Physics visited the Kirkaldy Testing Museum in Southwark in London and witnessed an unexpected event.

The museum was established to preserve the 'Universal Testing Machine' patented by David Kirkaldy in 1863, built by Greenwood and Batley in Leeds, and moved to its present purpose-built site in 1873. Here the Kirkaldy Testing and Experimenting Works continued in business until 1984. The museum has recently overcome a severe threat to its survival.

Paul Saulter

The machine can normally be seen once a month on the first Sunday, when it is open to the public, but private views can be arranged on other occasions. Normally, a sample of the 1874 wrought iron bars recovered from the former pavement grills in Southwark Street is tested on Kirkaldy's 440 ton machine but, for this special group, one of the thicker end pieces with a section of 2.3 x 0.6 inches was tested. The load on the carriage was increased from the normal 300lb to 900lb and a failure load of up to 45 tons was anticipated.



Fracture in wrought iron sample showing brittle layer

Hugh MacGillivray, museum chairman, who carried out the test, said: "The test went quite normally, but the sample failed at an unexpectedly low load of 72,000lb or 32tons. This was caused by a brittle layer in the iron bar invisible externally".

He added: "This is exactly the kind of problem the Kirkaldy's Testing and Experimenting Works was intended to find. The bar was quite strong enough for its intended use as a pavement grill but could have caused a serious problem had it found its way into a more critical structure such as a bridge".

The Works did indeed carry out critical tests on elements of the Tay Bridge after the disastrous collapse in 1879 and on components for the Hammersmith Bridge in London in 1887 and the Eads Bridge in St Louis, USA, at the time the longest arched bridge in the world and the first to use steel as its major component. Later testing included work for the Wembley Stadium in 1923 and on the supports for the Festival of Britain's Skylon in 1951.

A threat to the museum in 2013, posed by a substantial and unaffordable increase in rent and a proposal to turn the museum into a restaurant,

was finally allayed in 2015, when a new lease was signed on more favourable terms.

Good advice from the Prince's Regeneration Trust and swift action by the Greater London Industrial Archaeological Society, who applied successfully for an up-grade in listing to 2*, helped to save the day, backed up by strong legal support from GRM Law and surveyors Levy Iip, prominent London professionals.

An important lesson learned from this nail-biting tussle was the need to have precise

knowledge of the legal position, knowing who was available to provide expert advice, good contact with the local authority, persistence and the need in negotiations to abandon emotive arguments in favour of realistic goals. Influential supporters, such as the local MP and the relevant regional, national, and if possible, international organisations, while very useful, are not likely to sway developers with their eyes on the bottom line. The listing up-grade proved more valuable!

AIA Council Meeting February 2016

Two issues featured prominently at the Council meeting held in Leicester on 20 February. The first was the threats to industrial sites in the UK, while the second was the more parochial one of the possible erosion of the AIA's membership base.

Many of you have experienced problems with membership renewal, multiple requests, wrong amounts asked for, VAT added when it should not be, etc. On 3 February the President, Treasurer, Secretary and Ian West, as *Review* editor, met with five members of Taylor & Francis (T&F) staff in London. The meeting dealt with T&F's methodology for publishing the *Review*, membership management, the VAT issue, plus customer relations problems. We stressed the very real fears about having lost members because of invoicing errors.

The bigger the Association's membership base then the more weight our views carry with national and local authorities. On 25 November Chairman Keith Falconer wrote to Jennifer Mein, Council Leader, Lancashire County Council, concerning museum closures the council was considering making in response to funding issues. Keith urged the council to consider all possible alternatives for continuing public access to these museums, safeguarding the collections and for the continuation of a viable Historic Environment service.

Since the AIA's Council meeting we have learnt that several local groups have registered their interest in taking over Helmshore and Queen Street Mills. Lancashire County has now committed to keeping all museums under threat open until negotiations with these groups have been concluded. But the threat of closure has not gone away and it is not an open-ended commitment to keep things as they are.

On to more routine council matters, but still on the subject of threats to industrial buildings and sites, our Endangered Sites Officer, Amber Patrick, continues to make comments and recommendations on planning applications to the appropriate authorities. One of the sites commented upon was the Royal Worcester Porcelain works; in this case there appears to have been an attempt by the local authority to get the application through without proper consultation. But, thanks to twitter and social media, many people were made aware and did comment. Note to AIA members: stay alert to

what's happening in your locality (see page xx for suggested good practice).

The AIA has for many years promoted industrial heritage preservation through its very successful conservation grant awards and has promoted presentation through the publication and digital initiative awards. However, the AIA has not explicitly grant-aided research. Mike Nevell presented a comprehensive case for the creation of an Annual Research Grant Award - See page xx for more information.

One thing that the Association is very good at is putting forward the case for the preservation of our heritage on the basis of its historical and technical importance or uniqueness. What we do not do is present the economic case for retention, something we are not well qualified to do. It is the economic argument which has now become the dominant factor in planning decisions. Economic impact modelling tools are out there and are being investigated. During discussions on the new Annual Research Grant Award it was noted that research to quantify the economic benefit of our sector would be an ideal subject for an award.

A review of monetary amounts attached to our normal annual awards was carried out at the same time. It was agreed to increase the Dissertation Awards to £400 from £250, the Publication Awards to £400 from £300 and to reduce the Archaeology Awards from £800 to £500.

There will be two vacancies on Council at the forthcoming AGM; Steve Dewhurst having completed six years has to retire, and filling the other vacancy would bring us up to the full complement of nine elected members. Ideally one of these would fulfil the role of Publicity Officer. Publicising what we do, the grants we make, etc. is handled piecemeal at the moment, usually by the persons judging and handling the awards, we need someone to coordinate all these efforts.

Meanwhile, in order to ensure there is sufficient publicity regarding our restoration grants, it has been agreed that in future we would withhold the last 10% of any grant until an article has appeared in *Industrial Archaeology News* describing what has been achieved with the funds.

Bruce Hedge

AIA Directors' Report for 2015

Meetings and Representation

In 2015 the AIA Council met three times: Leicester in February, London in June and Coalbrookdale in October. Council members also represent the AIA and industrial archaeology matters in many other groups and committees regionally and nationally to promote the Objects of the Association. See page 16.

Notable losses in the IA sector in 2015

During the year we were saddened to hear of the deaths of Tom Rolt's widow Sonia, of AIA's past Honorary Secretary Barry Hood, of the founder of the Norfolk Industrial Archaeology Society Mary Manning, and of Brian Grimsditch of the Centre for Applied Archaeology at Salford University.



Sir Basil Spence buildings at Sussex University

Annual Conference 2015

This was held at Sussex University, Brighton, from 4 to 9 September and was well supported with 111 delegates attending over the six days. Owing to a surplus made at the Chester Conference the previous year Council was pleased to be able to subsidise the residential rate by £10 a night. At the Friday Seminar on *Valuing and Sustaining Britain's Industrial Heritage* we heard the ways in which the major funders support this sector: from HLF, Historic Scotland, Historic England, Cadw, the Architectural Fund, the Prince's Regeneration Fund, the Industrial Heritage Support Officer and the European Route of Industrial Heritage. There was a follow-up conference in Manchester on 1 and 2 December on *Reviving Places by Reusing Industrial Heritage*, co-sponsored by AIA. The Brighton and the Manchester events were AIA's contribution to European Industrial Heritage Year 2015.

Back in Brighton on 5 September, after lectures on the reconstruction of a 1911 locomotive, on the life of Harry Ricardo and the engines his company manufactured, and on Magnus Volk and his electric railway, there were reports on awards, contributions from members and the annual dinner. Following the AGM on 6 September attended by 75 members and guests John Minnis gave the Rolt Memorial Lecture on *Tom Rolt's Interest in Early Motoring*, an apt homage to the Lecture's namesake. There were then three and a half days of visits, firstly to Brighton, to the Jack and Jill windmills at Clayton and the water catchment system on the Stanmer

estate close to the university. The horrific accident at Shoreham Air Show meant that delegates were unable to visit the Ricardo works but went instead to Tangmere Military Air Museum. Goodwood Motor Circuit, the water pumping works at Coultershaw and the ice house and stables at Petworth House, as well as the fascinating artefacts store at the Weald & Downland Museum were other destinations. Further visits took delegates to the 1936 terminal at Gatwick airport, to the Bluebell Railway, the magnificent steam pumping engines at Brede, the De La Warr pavilion at Bexhill, Volk's electric railway in Brighton and finally to Amberley Museum.

Full credit must go to our Conference organisers John McGuinness and Stephen Miles, to the hosts at the study visit sites, and especially to Malcolm Dawes and his team in Sussex for planning the fascinating programme and for organising such excellent weather.

Publications

IA News: This quarterly is the bulletin and main communication organ of the AIA. Four issues under the editorship of Chris Barney were published by the Association in 2015, which continues to encourage high standards in all aspects of the study of industrial archaeology. 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 2015 included illustrated reports on gas holders, the Newman Brothers' Coffin Works in Birmingham, the AIA's Spring Tour to the Rhone Valley, and the restoration of the Newcomen engine at Elsecar.



Special conference transport

IA Review: Peer reviewed and with an international editorial board, the journal of the AIA edited by Dr Michael Nevell and Dr Ian West was published for the Association by Maney. However, that company was acquired by Taylor and Francis in June, who will publish the *Review* from 2016. The May issue, Volume 37.1, contained an obituary for Sonia Rolt and articles on: Industrial Heritage in Situ at Roşia Montană, Romania; Underground Electric Lighting in the 1880s; Clayton Mine, Ecton, Staffordshire; the Golden Era of Lager Breweries in the Southern Austro-Hungarian Empire; and on the Industrial Heritage of Salt in Cheshire. The November issue,

Volume 37.2 published Shane Gould's Rolt Lecture of 2012 on Industrial Heritage at Risk; Sousa Viterbo and the Idea of Industrial Archaeology; Risehill Tunnel Navvy Camp, Cumbria; and Industrial Heritage in Albania.

Conference Gazetteers

The Sussex gazetteer published for the Brighton conference was the last of a very long line designed and produced by John Stengelhofen for the Association, who announced his retirement from the role in September. We owe him an enormous vote of thanks for his professionalism in this role and hope we can find a worthy successor for future gazetteers.

Awards

To encourage scholarship and investigation in the industrial archaeology field, awards were made to archaeologists, historians, professionals and students:

The winner of the Peter Neaverson Award for Outstanding Scholarship was Lynn Parsons for *Built to Brew – the history and heritage of the brewer*.

The Peter Neaverson Digital Initiative Award went to Matthew Town of Northern Archaeological Associates for a LiDAR survey of the Grassington Mines on Grassington Moor, Yorkshire Dales National Park.

There were four entries in the Funded/Commercial Archaeological Report Award category. The winner was the *Archaeological Survey and Management Plan of West Stonedale Lead Mines, Swaledale, North Yorkshire* by Penny Middleton of Northern Archaeological Associates.

The Voluntary Societies Publications Award went to the Somerset Industrial Archaeology Society for the great improvement in their regular bulletins and their continuing publications programme. Of special note were two publications: *Cheddar in the Industrial Age* by Peter Daniel and *The Phoenix Works, Chard* by Derek Warren.

Three Peter Neaverson Student Travel Bursary awards were made: to Thomas Nancollas for a research trip to Scotland and Northern Ireland as part of his dissertation on rock station lighthouses; to Bill Pickering for attendance on a specialist course on oral history techniques for his dissertation on the 1929 North East Coast Exhibition of Science, Industry and Art; and to Daniela Wellnitz working on the Scottish Transport and Industry Collections Knowledge Network towards her attendance at the TICCIH conference in Lille.

A new award was established in 2015 for the Best Creative Re-use of an Industrial Building. Five awards were announced at the Manchester conference in December: the Silk Mill at Frome, Somerset; the Grave Digger's Hut at Painswick, Gloucestershire; Millend Mill at Eastington, Stonehouse, Gloucestershire; the Maltings at Lichfield, Staffordshire; and the Maltings at Fairfield, Goven, Glasgow.

Grants

In 2015 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. This year there was a record of 28 applications requesting total grants of £427,208 towards projects with a total value of over £7.1 million. Six awards were made:

South Tynedale Railway, Cumbria for the restoration of a tamping machine, £9,160.

Thorpe Light Railway, County Durham for the restoration of the 15inch gauge loco motive *Wendy*, £10,000.

Prickwillow Museum, Cambridgeshire for the restoration of a Vickers Petter 2- cylinder engine, £5,234.

Coker Rope & Sail Trust for the restoration of rope-making machinery, £3,713.

Stover Canal, Devon for the restoration of a graving dock, £10,550.

London Wildlife Trust, Hackney for the restoration of a gas house, £19,740.

Representations and Communication

Vice President Sir Neil Cossons, the President and the Chairman submitted representations to various bodies and local authorities about the threats to significant industrial heritage sites – notably about the Clipstone Colliery headstocks which are the tallest in England, the Kirdaldy Testing Station in London, Snibston Discovery Museum, Helmsore textile mills and Queen's Mill in Burnley which is the last steam-powered weaving shed in the world.

In October AIA launched a brand new web site. Council is indebted to Bill Barksfield and his committee for bringing this successfully to fruition and also extremely grateful to Michael Messenger who so ably managed the predecessor site for 20 years.

Industrial Heritage Support Officer (IHSO)

This scheme is now in its fourth year and the sector has benefitted enormously from the work of Ian Bapty, providing advice, support and training to help preserve industrial sites in England. The post is managed by the Ironbridge Gorge Museum Trust and is delivered in partnership with AIA and the Association of Independent Museums (AIM). Key outputs in 2015 have included:

25 groups/organisations supported with advice ranging from fundraising, to practical historic building management, re-locating a museum and volunteer development;

Training delivered to 16 organisations around the country;

Mutual working with a range of partners to maximise the industrial heritage support they

deliver (e.g. AIM, ERIH, Prince's Regeneration Trust, English Heritage, Historic England, Museums Association, University of Leicester and University of Birmingham);

Working with and supporting English Heritage work nationally (EH Industrial Network) and at regional level via 'Heritage at Risk' and 'Historic Places' teams (e.g. a collaborative project to develop skills training support for stationary engine groups in the North West);

Advocacy work, including attendance/participation at 11 meetings, 3 conferences, preparation of three articles, responses to two national consultations and media liaison.

Visits

Spring Tour, Rhone Valley, May 2015

Sue Constable set up the visits for this seven-day tour including a stop on the way at the impressive World Heritage Site of the Royal Salt Works at Arc-et-Senans which used brine that flowed from Salin-les-Bains 17km away. In Lyon there were visits to the Caluire Waterworks with its underground cisterns and preserved Cornish cycle beam engine, and to three silk industry sites including two workshops and the silk printing business of l'Atelier du Soierie. Between Lyon and St Étienne the group saw the small museum of ironworking at the Maison des Forgerons, and at St Étienne itself the larger Musée d'Art et de l'Industrie. These are just a selection of the sites visited and the journey home included the great complex of museum sites at le Creuset. A full report appeared in *IA News 174*.

Country House Comfort and Convenience

In this continuing series of specialist tours Marilyn Palmer and Ian West lead visits through some of the grandest residences in the UK looking at the introduction of technology in its broadest sense, helping us to understand some of the fascinating artefacts still to be seen. There were two trips this year: The first, led by Ian West in May, was to the North West where large, long-established country estates both co-existed with the industry on their doorsteps from the eighteenth century, and benefitted significantly from this upheaval, financially and intellectually. The three great houses visited – Lyme Park, Dunham Massey and Tatton Park – demonstrated this relationship splendidly, particularly at Tatton, which, by the end of the nineteenth century, had become perhaps the most technically-advanced house in Britain, employing many new ideas adopted from industry.

The second trip was in June to East Anglia led by Marilyn Palmer and included visits to Audley End, Wimpole Hall, Anglesey Abbey, Felbrigg Hall and Holkham Hall. The last of these was home of the great 'improver', Thomas Coke of Norfolk, with examples of early gas and electric lighting, heating and communications. The installation of electricity was in 1909 when the future fourth earl was due to return to London to see his newborn daughter but delayed his journey because 'they hope to start the electric light on Tuesday and I should so much like to be here for that!'

All Party Parliamentary Group (APPG) on the Industrial Heritage

Having met in March when Ian Bapty attended, this group was dissolved because of the general election in May but it was reconstituted in July and met just once during the year, in October. Tony Crosby represented the AIA at the meeting held at the Houses of Parliament. As Margaret Faull had recently retired, the AIA took over the Secretariat, led by Tony Crosby. The role is shared jointly with Kent County Council. All AIA members are requested to urge their local MPs to take an active part in this APPG and thereby raise the profile of industrial heritage.

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 (FRS 102).

Results: Subject to approval by the independent examiners, the net incoming resources for the year amounted to £17,716 with £30,793 attributable to restricted funds (2014: net outgoing resources of £35,886 which included £35,723 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 policy remains unchanged from 2014 whereby Council maintains a contingency for a late cancellation of the annual conference, for 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.

Acquisition of Maney by Taylor & Francis

Maney not only published *IA Review*, they also managed our membership services. Unfortunately the transfer of databases was not entirely successful, resulting in problems relating to renewals towards the end of the year. Council is grateful to all members for their forbearance and for renewing their membership once the errors were corrected. We are greatly indebted to Mark Sissons and John Jones for all their work in addressing the mistakes.

Changes on Council

Kate Dickson, Mark Sissons and Mark Watson were appointed as Council members in place of Amber Patrick and Chris Barney who had completed two consecutive 3-year terms and Helen Gomersall who had resigned earlier in the year. The Honorary Secretary is also the Liaison Officer who throughout the year continued to support Council, dealt with queries and forwarded information to the appropriate quarter. We are very grateful to all officers and members of Council for the extensive amount of time and effort that they commit voluntarily to ensure the smooth running of the Association through Council and its committees.

David de Haan, Honorary Secretary

Council Member's other duties

Besides their AIA roles, council members support industrial archaeology on many other bodies

Prof. Marilyn Palmer, our President, is on the National Trust Historic Environment Panel as a Specialist Advisor; on the Council for British Archaeology; she chairs the East Midlands CBA committee; is on the National Railway Heritage Awards committee; on the Leicestershire Industrial History Society as Vice President; on the committee of the Leicestershire Archaeological & Historical Society; chairs the Trustees of their Research Fund; represented AIA at the Heritage Alliance AGM along with David Alderton, Marilyn is also the Subject Advisor for Archaeology to the Third Age Trust. We were delighted to hear in June that Marilyn was awarded an MBE in the Queen's Birthday Honours list for 'services to Industrial Archaeology and Heritage'.

Keith Falconer, AIA Chairman, is on the All Party Parliamentary Group (APPG) on the Industrial Heritage; on the Industrial Heritage Support Officer steering group; on HLF's Industrial Maritime & Transport Group; member of the Canal & River Trust Heritage Advisory Group; on the European Route of Industrial Heritage UK group; on the AIA's advisory panel for European Industrial Heritage Year 2015; a Research Fellow at the History of Technology Research Unit at the University of Bath.

Dr Michael Nevell, Vice Chairman, is on Historic England's Industrial Archaeology Panel; Chair of the CBA North West Industrial Archaeology Panel; and Chair of the CIFA Buildings Archaeology Group.

Mark Sissons, the Immediate Past AIA Chairman, is on the CBA National Listed Buildings panel; on the Heritage Railway Association and as Archivist to them; on the North York Moors National Park archaeological panel; and both a director of, and archivist to, the North York Moors Historical Railway Trust.

David de Haan, the Honorary Secretary, is on the HLF's Industrial, Maritime & Transport group; and Vice Chairman of the Friends of the Ironbridge Gorge Museum.

John Jones, the Honorary Treasurer, is Records Officer of the Suffolk Industrial Archaeology Society.

David Alderton chairs the East Anglian Regional Industrial Archaeology organising committee.

Dr Robert Carr represents AIA at the AGM of the Heritage Alliance and the AGM of the British Archaeological Awards; on the Newcomen Society; the Greater London Industrial Archaeology Society; and the AIA representative on TICCIH-GB.

Tony Crosby is on the Historic England Industrial Archaeology Panel; on the All Party Parliamentary Group (APPG) on the Industrial Heritage; on the Essex Industrial Archaeology Group as Chairman; and on the Waltham Abbey Royal Gunpowder Mills as director.

Ian Miller is a member of the Industrial Archaeology Committee of the Cumbria & Westmorland Antiquarian and Archaeological Society.

Roy Murphy is on the Council of the Droitwich History & Archaeology Society; on Droitwich Town Council's Planning Committee; and represents AIA at regional Industrial Archaeology conferences.

Amber Patrick is the Endangered Sites Officer and is on the Council of the Gloucestershire Society for Industrial Archaeology.

Paul Saulter was until October the AIA Liaison Officer on E-FAITH – European Federation of Associations of Industrial and Technical Heritage; on the AIA's advisory panel for European Industrial Heritage Year 2015 and a Director of Kirkaldy Testing Museum (Southwark) Ltd.

Kate Dickson took over from Paul Saulter as AIA Liaison Officer on E-FAITH from October; she is a Trustee of the Architectural Heritage Fund; a member of the National Trust Regional Advisory Board for the North West; Membership Assessor and member of the Membership & Ethics Committee of the Institute of Historic Building Conservation; and Chair, Midlands Regional Committee, of the UK Association of Preservation Trusts.

Mark Watson is the UK representative of TICCIH – the International Committee for the Conservation of the Industrial Heritage; he sits on the Scottish Industrial Archaeology Panel; the Institution of Engineers & Shipbuilders in Scotland Hall of Fame judges panel; the Scottish Institution of Civil Engineers Panel for Historical Engineering Works; and on the committees of the Scottish Industrial Heritage Society, the Scottish Vernacular Buildings Working Group, the Institute of Historic Building Conservation Scotland branch, and STICK – the Scottish Transport & Industry Collections Knowledge Network.

Shane Kelleher is a Trustee of the Birmingham Conservation Trust; on the Archives and Collections Committee; and on the Archaeology Committee of the Historical Metallurgy Society.

AIA Research Grant

The AIA exists to promote the study, preservation and presentation of Britain's industrial archaeology and heritage. It has for many years promoted industrial heritage preservation through its very successful conservation grant awards, and has promoted presentation through the publication and digital initiative awards. However, the AIA has not explicitly grant-aided research. Study, or research, has been promoted through the dissertation prize, through the publication of Industrial Archaeology Review and the sponsorship of research conferences. Hitherto the AIA has not been involved in initiating or promoting research into industrial archaeology, beyond the boundaries of the existing award schemes. The experience of other societies suggest that modest amounts of research funding can, in the medium to long term, make a large impact in our understanding of a subject.

As the only national body focussed upon industrial archaeology the AIA is founding a new grant to:

- encourage individual researchers to study industrial archaeology subjects;
- encourage the development of industrial archaeology skills within commercial units, the main repository of professional skills in the subject;
- support local industrial archaeology and industrial heritage societies in exploring and understanding their local areas;
- help develop the next generation of industrial archaeologists.

The grant will be available to anyone working in industrial archaeology in the UK - volunteer, student, academic or professional. Societies or organisations can apply but would need a named individual as the lead.

The total fund available in any single year will be £1500 and each grant proposal will be subject to a maximum of £1500. The AIA may award one or more grants in any given year. The grant must form a significant part of the overall research funding being sought or must support a distinct and discrete element of a wider research project.

The researcher must submit a report about their project for inclusion on the AIA website and in IA News and must acknowledge the role of the AIA in supporting their work in any publicity.

Awards will be announced once a year at the AIA Annual Conference.

The council have agreed to operate the system for three years starting in September 2016, after which the scheme will be reviewed,

Mike Nevell

AIA Autumn Practical Day

There will be a Practical Day on 22 October in Coalbrookdale.

The subject will be Iron Furnaces and details will be on the AIA website shortly and in *AIA News 178*

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For further details, contact the Editor.

AIA Conference 2016

September will be with us all too soon but I'm looking forward to our conference which returns to Shropshire for the first time since 1979. A couple of the tours in this year's programme also happened in 1979, but so much has changed in the intervening 37 years we decided they were worth a re-visit, especially Ditherington Flaxmill Maltings.

The Friday Seminar on 'Britain's Industrial Heritage: What has world heritage site inscription done for us?' brings together some challenging themes. Speakers have been asked to allow ten minutes at the end of each session for questions so that we can air issues there and then. Apart from hearing from those directly involved managing several of the UK's world heritage sites, we will also hear the results of a recent survey by the UK National Commission for UNESCO about measuring the added value of being a WHS. We've invited the chair of the Ironbridge World Heritage Steering Group to talk about Ironbridge because he was the Chief Architect during the restoration of the town in the late 1970s, a man with an unrivalled depth of experience. We've also asked to hear the views of a major developer whose approach has different pressures to those of the heritage managers, and to hear the experience of one site which failed in its first application and is trying again. To end the seminar our vice president Sir Neil Cossons will share the lessons learnt from his international experience of industrial world heritage.

The main conference programme is a mixture of context and case studies interspersed with tours in Shropshire. There is no one more qualified than Barrie Trinder to set the scene on Friday evening and before the meal we will launch the new edition of his *Industrial Archaeology of Shropshire*. All delegates will get a copy in their conference packs; members who don't attend will get their copies in the post soon after. Historic England's Inspector of Buildings, John Yates, will deliver the Rolt Lecture on Ditherington and also lead the tour there. As usual, bookings are on a 'first come, first served' basis, but there are equally fascinating visits that afternoon to the limestone mining area around Lilleshall and to the conservation centre of RAF Museum, Cosford. Our subsequent tours are in Shropshire and beyond, including Staffordshire, Birmingham, Worcestershire and North Wales. One of the Shropshire visits is to the icon of industrial archaeology where after a dinner at the Museum on Tuesday I will be guiding a tour of the Iron Bridge by torchlight! We urge delegates to bring along their own torches that evening, and if you opt for the underground tour of the Snailbeach mines earlier that day you will need to wear wellies. The conference venue is the Telford Innovation Campus of Wolverhampton University, within a mile of the M54 junction and Telford Central Station, a very compact site for our needs and one where we get a proper bar for socialising.

Looking forward to seeing you in Telford in September.

David de Haan



The Model Farm at Apley Park



The Iron Bridge by torchlight

Mill Meece Pumping Station



Is this the definition?

I always found Barrie Trinder's proposal to be characteristically helpful, published in the relevant entry in his 1992 Blackwell Encyclopedia. His is a movable feast, that today's technology becomes 'Industrial Archaeology' as soon as it is obsolete, a formulation both practical and intellectually satisfying.

James Douet

Alnwick Castle Lift

I was most interested in Tim R Smith's article, *The Hydraulic Lift at Alnwick Castle (IA News 176)*, which featured a large hydraulic ram whose piston moved a rack to drive the lift's winding drum through speed-increasing gearing. The author asked who made it.

Well, the *Alnwick Mercury* of 1 September 1860 had an article describing the modernisation work which had been done at Alnwick Castle, starting in 1854, quoting from *The Builder*. Here's an extract, with my emphasis:

'The numerous larders and sculleries have been conveniently placed on one level; and **hydraulic lifts from the kitchen to the principal floor also combine to save unnecessary labour: these latter are the engineering works of Messrs. Easton & Amos.....** The machinery and ironwork required in the building operations were furnished by Messrs. Hawks & Crawshay, of Newcastle, with the exception of the immense girders and joists for the fireproof floors, which were provided by Messrs. Barrett, of the Adelphi.'



In passing, I read the article in the copy of *IA News* delivered to Westonzoyland Pumping Station, where I'm a volunteer. Our prize exhibit at the museum is a steam drainage machine made by Easton & Amos of Southwark in 1861 (actually Easton, Amos & Sons at that time). We believe that it has a claim to fame; we are not aware of there being an older operational centrifugal pump in its original location – anywhere.

John Ditchfield, Somerset.

Woodberry Wetlands restoration



Woodberry Wetlands, Coal House during restoration

Our grant from the AIA supported the restoration of a Grade II listed former gas house (now known as the Coal House) on the banks of the East Reservoir, a focal point of the brand new Woodberry Wetlands nature reserve in Hackney, east London. On 30 April 2016, London Wildlife Trust formally opened to the public, Woodberry Wetlands, London's major new nature reserve and outdoor visitor and learning space, for the first time since the reservoir was created some 200 years ago. The Coal House has been transformed from an 'at risk' building in a state of disrepair to a renovated visitor hub for the reserve, housing a learning and café space.

We are delighted to report that the Coal House building works are now complete. The building has been fully restored and is looking

wonderful. The brick walls have been underpinned and re-pointed, the limestone frieze on the north façade has been cleaned and the lettering defined using traditional stonemasonry techniques.

Internally, the polished concrete floor and lime washed walls give the rooms a fresh feel and the restored Crittall windows allow light to flood in throughout the day. A bespoke steel staircase gives access to a roof terrace where the public can enjoy amazing views of the surrounding area, including both reservoirs.

We are extremely grateful to AIA for their kind donation and support in restoring and transforming this at risk building into an exciting venue at the heart of a wonderful new wildlife reserve.

London Wildlife Trust



New interior stairs from roof terrace to ground floor

Battersea Power Station Redevelopment

As part of the redevelopment of Battersea Power Station, the structurally-fragile chimneys had to be dismantled and rebuilt as exact copies of the original. The south-west chimney, closest to the camera, is now complete and it is the turn of the south-eastern one to be dismantled.

This angle of view is accessible to most people only from a train between Battersea Park and Victoria, hence the hints of window reflection.



Battersea chimneys under reconstruction © Christopher Hilton and licensed for reuse under Creative Commons Licence

Battersea Power Station was actually two power stations side by side: Battersea 'A' and Battersea 'B'. The construction of Battersea 'A' began in 1929 and was completed in 1935 although it first generated electricity in 1933. The site chosen was a 15-acre plot of land which had been the site of the reservoirs for the former Southwark and Vauxhall Waterworks Company. This site was chosen for its proximity to the river Thames for cooling water and coal delivery, and because it was in the heart of London, the station's immediate supply area.

Construction on the second phase, the 'B' station, began after the end of the second world war and it came into operation gradually between 1953 and 1955. It was identical to the 'A' station from the outside and was constructed directly to its east as a 'mirror' to it, which gave the power station its four-chimney layout.

Battersea 'A' closed down in 1975 and Battersea 'B' in late 1983. The building is listed Grade II*, cited as being 'of outstanding interest on architectural grounds as a monumental example of an inter-war utilities building, designed by a leading architect of his day' (Sir Giles Gilbert Scott). Although there were several plans put forward for its reuse, the building lay empty for 30 years before the current restoration and conversion works began in 2013.

Lee-on-the-Solent Museum fights to prevent the loss of the Cross-Channel Hovercraft



SRN 4 Hovercraft Princess Anne

As developers move in with bulldozers, the Hovercraft Museum Trust is fighting desperately to save one of the two remaining cross channel SRN4 hovercraft from destruction.

Resident at the site since they were decommissioned in 2000, the *Princess Margaret* and *Princess Anne* are the last of the 250 ton monsters that used to cross the channel with 400 passengers and 55 cars on board, their gas turbine engines making the crossing possible inside half an hour in good conditions. They were built on the Isle of Wight by the British Hovercraft Corporation in the 1970s and operated from both Dover and Pegwell Bay before being replaced in 2000 by a catamaran service.

Owing to essential building work on the hovercraft museum buildings at Lee-on-the-Solent, the hovercraft museum had not been open to visitors for nearly two years and only reopened in January 2016 - it's been a difficult period. But since then visitor numbers have been encouraging and the future was looking promising for this small volunteer run museum. Although stored at the museum, the SRN4s are not owned by the Hovercraft Museum Trust and there has been a protracted legal battle between the craft and site owners so these gentle giants have found themselves caught in the middle. This came to a sudden resolution and the hovercraft

now face destruction and removal unless a last-minute reprieve is granted by the site owner.

Hovercraft Museum trustee Emma Pullen said "the SRN4s are the centre point of the museum and our most important exhibits. Many people come simply to see these huge relics from a bygone age and their loss would be an enormous blow to the museum. But more important than that is the fact that they are a piece of British history, the like of which we will never see again. The Hovercraft Museum trust is dedicated to preserving them and we hope that a deal can be reached to allow this to happen. The final decision is out of our hands - and this has all happened at very short notice, but we will do everything in our power to protect at least one of these national treasures."

The museum has acted quickly and submitted a proposal to the site owner to save the *Princess Anne* which is in the most favourable location and in better condition than the *Princess Margaret*, which they have reluctantly accepted is likely to be broken up and sold for scrap.

The trustees have set up a petition page, the link to which can be found on their Facebook page 'the Hovercraft Museum' and they are encouraging those with an interest in British industrial history to sign and share it. For more information - search: Hovercraft Museum.

Didcot Collapse

On Tuesday 23 February an appalling accident took place at Didcot A power station. Coleman and Company were demolishing the power station and while the boiler house, one of the few parts of the power station still standing, was being prepared there was a partial collapse of the building. People were killed and as far as we

know not all bodies have been recovered. Coleman and Company are a prestigious firm who successfully demolished the four gas holders at Battersea and have also done sterling work at New Street Station in Birmingham.

Robert Carr

News from London

From an industrial archaeological point of view Worcester Park in south-west London was significant for its three fine gasholders alongside the railway and to the south-east of these a large sewage treatment plant. In the last fourteen years an amazing transformation has taken place at the sewage farm. It is now an astonishing housing development The Hamptons. The new buildings are clad in timber, painted in muted tones and boast verandas, colonnades and stone chimneys. Totally pristine and whiter than white, the architecture is strongly New England (Colonial Revival) in style and visiting here one is reminded of Michael Portillo and his recent television series on historic America. The developers, St James Homes, clearly decided that any hint of the site's former industrial past must be totally expunged and this has been achieved to an amazing extent.

Before the housing development a photographic survey was carried out at the sewage treatment works. There was a pumphouse here constructed from yellow stock brick laid in Flemish bond with a decorative band of red bricks. The building had a doorway with portico supported on brick piers. No buildings were retained and an investigation of the sub-surface archaeology concluded that there was little of real significance under the site.

At one time HG Wells lived in The Avenue, Worcester Park. In 1895 he wrote a short story, *The Argonauts of the Air*, in which an enormous structure, a massive alley of interlacing iron and timber, is built to launch a flying machine. This structure was built at Worcester Park and became a notable landmark for people passing through. In the story, the flying machine is finally launched

and flies over London but eventually crashes at South Kensington.

Moving our narrative further into London; Keybridge House, 80 South Lambeth Road, Vauxhall, is 15 stories high and 246 feet tall. It was built for the Post Office in 1975 on the site of Brand's Essence factory which manufactured Brand's Essence of Beef, Brand's Essence of Chicken and so on. Occupying a prime site the present building is likely to be demolished shortly for luxury flats. Keybridge House was designed by GW Mills and Associates. Here British Telecom created the UK's first international digital telephone exchange and it was the world's largest. The building is said to have a vast basement.

Renowned in the days of the British Empire as a restorative for the infirm, Brand's Essences found their way to the far east in the 1920s, and have since gained popularity throughout Asia. In 1982 Brand's launched the world's first bottled bird's nest, prepared using traditional recipes. Clearly a commercial success, in August 2010 they opened 'the world's largest bottled bird's nest manufacturing facility' at Pinthong Industrial Estate in Thailand. In a number of Asian cultures, bird's nest soup is not only a delicacy but considered medicinally beneficial, believed to aid digestion and strengthen the immune system. Recent scientific investigation suggests that this belief may have some credence. The trade name Brand's is now owned by Suntory Holdings Limited based in Japan.

Famous for its appearances on television as a backdrop to cricket matches, gasholder number one at the Oval, Kennington, has been listed grade II. It is claimed that this was the largest gas

holder in the world when first built in 1847; it was rebuilt 1877 – 79.

Emily Gee, Head of Designation at Historic England said: "We consider our industrial heritage very carefully, and must be rigorous when assessing these once ubiquitous, now redundant holders for listing. It is unlikely that many more will be listed, but we are delighted that this special one is now listed at Grade II".

Following the example of the Triplets at St Pancras, there is now a possibility that flats might be constructed inside the guide frame. We might just be experiencing the apotheosis of the gasholder: a new free local newspaper 'The Gasholder' has been launched in the St Pancras – King's Cross area, serving the adjacent parts of Camden and Islington. The Design Museum currently situated near St Saviour's Dock is moving to the former Commonwealth Institute on Kensington High Street. The Institute, designed by Robert Matthew and Partners with structural engineers, Harris & Sutherland, has been very considerably refurbished. Built 1960-62, it is listed grade II*.

In the London Borough of Hackney there is a campaign to save the Castle Electric Cinema in Chatsworth Road. Built in 1913, it served as a cinema until 1958 when it became a Bingo club. In more recent times it fell into disrepair and it remained dilapidated until 2014 when a Spar supermarket and burger bar, Eat17, were installed at the front of the building. Presently there is only one independent cinema in Hackney, the Rio in Dalston. The new cinema would accommodate 60 people using the space behind the supermarket and Eat17 which will continue in business.

Robert Carr



Gasholder dominates Kingshill Avenue, Worcester Park

Photo: R Carr

Bradford's Drummond Mill destroyed



Drummond Mill after the fire

Drummonds Mill in Manningham, Bradford was ravaged by fire on 28 January and the building had to be demolished after it partially collapsed.

At its height, more than 100 firefighters tackled the blaze which started in the basement. It looks to be a rare case of cumulative collapse, so that although the mill had fireproof construction, the fire had such intensity that a local collapse was repeated on each floor in the centre of the mill. The mill had ceased spinning but was used for a variety of community purposes.

Groverake Mine



Groverake Mine County Durham, headgear

Concern is mounting over the future of one of the last 'monuments to lead mining' in the North Pennines. What remains of Groverake Mine, near Rookhope, in Weardale, County Durham, which has the last remaining headgear in the North Pennines orefield is under threat following a fire on 13 November.

Mining started at Groverake in the early 1800s and major operations were developed by the Beaumont Company in the 1810s. It started producing fluorspar under the ownership of Weardale Lead Company and after the Second World War was one of the leading producers of the mineral.

When it closed in 1999 it was thought to have been the last fluorspar mine operating in England and the last deep mineral mine in County Durham. The mine owner is required to clear the site by September 2016.

The surviving infrastructure is some of the last evidence of mining to be preserved in Weardale.

Durham County Council put a building preservation order on the winding house in 2013, when it described the buildings as a 'unique collection'. That safeguarded the building for six months while the council applied to get listed building status to give it lasting protection. However, English Heritage/Historic England said it did not meet the criteria.

At an open meeting at Rookhope on 13 January an ad-hoc committee was created for the Friends of Groverake, chaired by Mark Hardy.

The committee has been in communication with the mine owner and the landowner's agent.

The committee has a Facebook Community page titled Friends of Groverake which aims to provide factual information about the progress of negotiations to safeguard the site.

Friar Gate Bridge Derby

Built in 1877 by Andrew Handyside, a Derby ironfounder for the Great Northern Railway, across the georgian street, Friar Gate, this bridge with its ornamental cast ironwork is very much a local landmark. Although basically sound it has become very shabby, corroding and swathed in safety netting.

The Friends of Friar Gate Bridge is a new charitable group formed to secure funding and enquire Derby City Council, who own the bridge, to complete a full conservation project and then to allow public access.

The group recognises that the council budget is limited but by showing local support they hope to secure funding from the Heritage Lottery Fund.

The last crossing of the bridge was by a BR research train in November 1977. Passenger traffic ceased in 1964.

Flanagan and Allen wrote 'Underneath the Arches' in 1927 while performing in Derby as a tribute to the homeless people who slept under the arches next to Friar Gate Bridge during the depression. The arches were demolished in 1987.

Search friargatebridge for more information.



Friar Gate Bridge in better days

Photo: Richard Johnson engineering timelines

Enderby Wharf meeting

Campaigners want to ensure a listed house and cable loading gear are preserved to remember the key role they played in the global telecommunications industry. The resident-led Enderby Group hosted a visit to Enderby Wharf in East Greenwich in a bid to ensure a sustainable future for the site which would celebrate the industrial history of the area, particularly relevant with the bicentenary of the birth of Daniel Gooch who took the leading role in laying the cable for which he received his baronetcy.

The riverside site is being developed by Barratts Homes and part of the wharf is set to be home of the London City Cruise Port. Enderby House, which is derelict, is Grade II listed and so will have to be preserved, but the campaigners want any revamp to include an educational element on its history.

The house, dating from 1846, was built by Samuel Enderby whose family ran Britain's largest whaler and sealer ships. It became an important site for the production of submarine communications cables including the first

transatlantic cables to be laid at the bottom of the ocean. The house is listed because of its octagonal first-floor room which gives views of approaching ships.

The site visit was attended by Matthew Pennycook the MP for Greenwich and Woolwich, Len Duvall the London Assembly Member for Greenwich and Lewisham, the leader of Greenwich council Councillor Denise Hyland and representatives from museums.

Barratt Homes will have to preserve Enderby House as part of its planning consent for the site. A Barratt spokeswoman, said: "A regenerated Enderby House is an integral part of Barratt London's Enderby Wharf development. No decision has yet been made on how the building will be used in future although we will be continuing discussions with local interest groups to ensure that its historic legacy is respected in any future use."

Brewery support for Etruria Museum.

The Etruria Industrial Museum in Stoke has won brewery backing to promote the unique heritage site. The collaboration between museum volunteers and the Wincle Beer Company is thought to be the first of its kind. The launch of a new cask beer, 'Bone Crusher' will celebrate the museum and the tireless work of the volunteer group that was established 38 years ago to save Shirley's Bone and Flint Mill, the last steam powered potters' mill in the world.

The mill operated from 1857 to 1972 calcining and crushing bone, Cornish stone and flint for the potters to blend with china clay to produce English bone china. Bone meal was also produced for soil improvement in agriculture. The mill has now become the Etruria Industrial Museum.

The brewery wished to extend their range with a beer that would have an authentic Staffordshire Potteries heritage while increasing the awareness of the museum to a wider audience. Beers produced by the Wincle Beer Company are all based on real life characters. Thus Bone Crusher features Barry Job, the longest serving volunteer who started at the Etruria Industrial Museum in September 1978, on the pump clip. The name 'Bone Crusher' was chosen to clearly reflect the museum's history and hopefully encourage the public to visit the museum and the beam engine *Princess* driving the mill machinery. The beer is a full bodied, classic chestnut cask English ale. The pump clip briefly tells the story of how the mill was saved, so every time a pint is ordered at the bar the volunteers will connect with their target audience and encourage more visitors to the museum.

The beer will be listed in pubs throughout the Potteries and beyond. The brewery will be promoting the museum and its calendar of events on its website and in the brewery shop. The volunteers were at the Holy Inadequate, Etruria, in mid February for the successful launch of 'Bone Crusher' as it went on sale.

Barry Job

Anniversaries 2016

Compiled by Steve Worsley Suffolk Industrial Archaeology Society

1716

France established the *Corps Ingenieurs des Ponts et Chaussées*, the first national department of transportation.

Henri Gautier published *Traites des Ponts*, the first volume entirely concerned with building bridges, which remained the standard text on the subject throughout the 18th century.

Birth of James Brindley (died 1772). Pioneering British canal engineer (Bridgewater Canal, Trent & Mersey Canal, etc.).

Birth of Pierre Tresaguet (died 1794), French road engineer who in the 1770s developed a system of road construction similar to that later made famous by Thomas Telford.

1816

Birth of (Sir) Daniel Gooch (died 1889). Became the first locomotive engineer to the Great Western Railway when only 21 years of age in 1837, remaining in the post until 1864. Made a baronet for his work on the Atlantic cable. Returned to the GWR as Chairman in 1865, one of the few examples of an engineer becoming an administrator.

Birth of (Sir) James Brunlees (died 1892). Engineer, best known for his river crossings. His method of piling allowed the construction of the lengthy Kent, Leven and Solway Firth viaducts in what is now Cumbria, whilst later he was responsible for the Mersey Railway's tunnel between Liverpool and Birkenhead. Was engineer (1872-86) to the first Channel Tunnel scheme. President of the Institute of Civil Engineers, 1882-3.

Birth of William Barber Buddicum (died 1887). Railway engineer, developed the 'Crewe type' locomotive. Set up a locomotive works in Rouen, France, and as a result is better remembered on the continent than his native land.

Birth of Thomas Russell Crampton (died 1888). Railway engineer. Locomotives to Crampton's patent were popular in France, less so in Britain. He also laid the first international submarine cable between Britain and France.

Birth of Henry Robertson (died 1888). Partner in the Brymbo Iron Works near Wrexham.

Birth (December 13) of Werner von Siemens, (died 1892), German electricity and tramway pioneer.

Birth of Henri Dupuy de Lome, (died 1885), designer and builder in 1872 of an airship driven by the muscle power of eight men. It actually worked, but was not continued with.

Birth of Robert Sinclair (died 1898). Engineer of the Eastern Counties Railway (1857 – 62) and then the Great Eastern Railway (1862 – 66).

Death of Richard Reynolds (born 1735). Manager of the Coalbrookdale Ironworks 1756 – 1772. Married Hannah Darby, daughter of Abraham Darby II.

Death of Charles Stanhope (Third Earl of Stanhope, born 1753). Built an unsuccessful screw-driven steam boat in 1793, and planned the Bude Canal in north Devon which was not completed until 1823, after his death, due to delays caused by the Napoleonic Wars.

Wire manufacturers Josiah White and Erskine Hazard completed the first wire suspension bridge in the World, a 408 foot span over the Schuylkill in Philadelphia.

The Leeds & Liverpool Canal was finally completed, having been commenced in 1770. It was (and is) Britain's longest canal at 127 miles.

Samuel Courtauld III set up a man-powered silk mill in Panfield Lane, Bocking. His father George had been throwing silk using water power since 1798 in Pebmarsh.

1916

Death of Ernst Mach (born 1838), Moravian physicist who investigated ballistics and noted the change of airflow over an object as the speed of sound was approached. High speed aeroplanes now have their speed described in 'Mach' numbers, rather than in kilometres per hour. (Mach 1 = the speed of sound).

Death of Sir Hiram Stevens Maxim (born 1840), US-born inventor who became a British subject in 1900. Designed an automatic fire sprinkler, a hair-curling iron, an improved mousetrap, and, most famously, the Maxim machine-gun which was in daily use at the time of his death.

On 15 September the first tanks went into battle at Ginchy, on the Somme.

The last of sixteen transporter bridges to be built in the world, located within the chemical works of Joseph Crosfield & Son Limited across the River Mersey at Warrington, was completed. It is still in existence, albeit not in use.

The King George V Bridge, Keadby, an impressive Scherzer rolling-lift bascule bridge, was opened across the River Trent to the west of Scunthorpe. It carries a double track railway and the A18 road.

The Dunlop Company, tyre manufacturers, erected their new factory, Fort Dunlop, on a 300-acre site to the east of Birmingham.

Petroleum company Shell commenced refining at Shellhaven on the River Thames. Closed in 1999 and now a container terminal.

Early Railways – Information wanted

Historic England – the United Kingdom government's principle adviser on the historic environment of England – has recently commissioned a study on early railways. It is being carried out by Dr David Gwyn (Govannon Consultancy) and Neil Cossons and is due for completion in July 2016. The following is a short summary of the brief:

This project concerns early railways, which have been the subject of renewed research interest in recent years. As a consequence of their date (mostly pre-1830), surviving assets of early railways frequently fall within categories of buildings or structures that need to be assessed for special historical or architectural interest or archaeological sites and monuments of national importance. We need to ensure that assessment is based on the most up-to-date research available and that the assets identified in the course of that research are adequately protected. This project will summarise current research, consider what is already protected and explore gaps within it, together with drawing up a strategy for future protection, both at national and local levels.

Early railways are broadly defined as those that pre-date steam locomotive haulage but the study will also include transitional lines that may be post-1830 in date (but with a cut-off of 1840) but have earlier characteristics – eg cable-inclines.

As a preliminary to the study initial consultations have already taken place with the Early Railways Committee but David Gwyn and Neil Cossons would be particularly grateful to hear from any members who wish to bring specific sites to their attention, or who would like to tell them about any community or research projects of which they know. Please contact David at govannonconsult@hotmail.com

Ten years of Cornish Mining World Heritage Status

To celebrate the 10th anniversary of the Cornwall and West Devon mining landscape being given UNESCO World Heritage status in 2006, a series of events are planned. The most spectacular will see the largest puppet made in the UK walk the length of the Cornish Mining World Heritage Site. The 'Man Engine', a 12 metre high steam powered giant Cornish Miner, will make the journey from Tavistock to Land's End from 25 July to 6 August 2016.

Local Society and other periodicals received

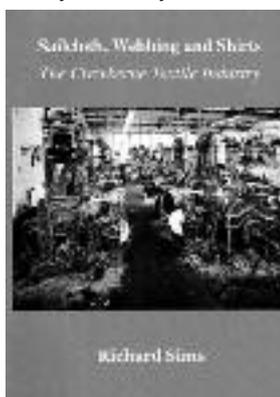
Abstracts will appear in *Industrial Archaeology Review*.

- Bristol Industrial Archaeological Society Bulletin*, 147 Spring 2016
- Cumbria Industrial History Society Bulletin*, 94, April 2016
- Greater London Industrial Archaeology Society Newsletter*, 282, February 2016
- Historic Gas Times*, 86, March 2016
- ICE Panel for Historical Engineering Works Newsletter*, 148, December 2015
- Industrial Heritage Association of Ireland Newsletter*, 47, February 2016
- Manchester Region Industrial Archaeology Society Newsletter*, 152, Spring 2016
- Merseyside Industrial Heritage Society Newsletter*, 349, December 2015; 352, April 2016
- Northamptonshire Industrial Archaeology Group Newsletter*, 137, Winter 2016
- Piers: the Journal of the National Piers Society*, 117, Autumn 2015; 118, Winter 2015
- Scottish Industrial Heritage Society Bulletin*, 77, December 2015
- South West Wales Industrial Archaeology Society Bulletin*, 125, February 2016
- Suffolk Industrial Archaeology Society Newsletter*, 132, February 2016
- Surrey Industrial History Group Newsletter*, 209, February 2016
- Sussex Industrial Archaeology Society Newsletter*, 169, January 2016
- Sussex Mills Group Newsletter*, 168, January 2016
- Trevithick Society Newsletter*, 170, Winter 2015
- Triple News: Newsletter of the Kempton Great Engines Society*, 48, Spring 2016
- WaterWords: News from the Waterworks Museum, Hereford*, Winter 2015/16
- Worcestershire Industrial Archaeology and History Society Newsletter*, 48, March 2016
- Yorkshire Archaeological Society Industrial History Section Newsletter*, 96, Early Spring 2016

Books

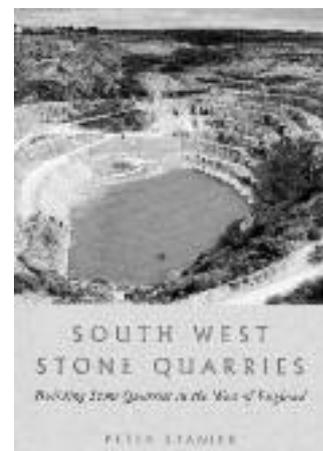
Sailcloth, Webbing and Shirts: The Crewkerne Textile Industry, by Richard Sims, Studio 6 Publishing, Bridport, 2015. ISBN 978 0 9576931 1 1. 165pp, 213 illus. £15.

This comprehensive history of the textile manufacturing around Crewkerne in south Somerset describes the industry from early times to the present. It covers the growing and processing of flax and hemp upon which much of the industry was based. The development of sailcloth and webbing manufacturing in pre-factory domestic workshops in Crewkerne and the surrounding villages is described, followed by the main section on six textile factories. Short sections on horse hair manufacturing and workers' housing are included, before a final chapter on shirt manufacturing in the town. The industrial archaeology is well served by many photographs, plans and references.



South West Stone Quarries: Building Stone Quarries in the West of England, by Peter Stanier, Twelveheads Press, Chacewater, 2015. ISBN 978 0 906294 83 3. 216pp, 245 illus, colour. £18.

The book describes the quarrying and production of quality stone in south-west England. Much has been used in prestigious buildings, bridges and monuments in London and each stone contributes to the distinctive character of the region's towns and villages. The quarrying of limestones, sandstones, granite and slate is described, with chapters devoted to famous names such as Bath, Cotswolds, Delabole, De Lank, Doulting, Forest of Dean, Ham Hill, Keinton Mandeville, Portland and Purbeck. The traditional industry has seen dramatic changes in methods of extraction, processing and transport over the past 120 years. The book follows the Victorian geologist George Harris, visiting the same quarries he saw and described in the 1890s, comparing this with how they work today in a highly mechanised world.



Conference on the history of roads and the vehicles that travelled on them

9.30am Saturday 31 October at the Town Hall, Devizes

- Richard K Morris – 'The Archaeology of Roads'
- Dr John Chandler – 'Turnpikes and Stagecoaches'
- Mike Stone – 'Macknes – wagon and car repairers of Chippenham'
- Jim Watkinson – 'Scout Motors of Salisbury – 1902-21'
- Tim Bryan – 'Motor car manufacture in Swindon'

Tickets £14

Bookings – by phone – 01380 727369;
by post – Wiltshire Museum, 41 Long Street, Devizes SN10 1NS
cheques payable to WANHS Ltd
or via the Museum website – www.wiltshiremuseum.org.uk.

EERiac

East of England Regional Industrial Archaeological Conference

9.30 Saturday 11 June

Shuttleworth House, Old Warden, Biggleswade, Beds, SG18 9EA

An opportunity to visit the unique collection of historic aircraft, vehicles and agricultural machinery begun by Richard Shuttleworth in the 1930's. Hear presentations on the restoration and operation of the exhibits, explore the hangars, smell the engine oil, and see the engineers at work.

Robin Chandler 01480 465571
robin.chandler@btinternet.com

16 – 22 May 2016
AIA SPRING TOUR TO ROMANIA

Details from Heritage of Industry
info@heritageofindustry.co.uk

2 – 5 June 2016
SIA 45TH ANNUAL CONFERENCE

Kansas City, Missouri, USA

11 June 2016
EERIAC EAST OF ENGLAND REGIONAL INDUSTRIAL ARCHAEOLOGICAL CONFERENCE

Shuttleworth House, Old Warden, Biggleswade, Beds, SG18 9EA
 See page 23

16 – 19 June 2016
6TH INTERNATIONAL EARLY RAILWAYS CONFERENCE

Newcastle-upon-Tyne
earlyrailways.org.uk

17 – 19 June 2016
E-FAITH TECHNICAL WEEKEND ANTWERP

Industrial Heritage Tourism: the role of volunteers and local citizens
 See page 5

17 – 19 June 2016
REUSE OF INDUSTRIAL SITES A CHALLENGE FOR HERITAGE CONSERVATION

Universidade Luisiada de Lisbon
 See AIA website

17 – 19 June 2016
NAMHO CONFERENCE

National Association of Mining History Associations
 Dublin City University, hosted by the Mining Heritage Trust of Ireland
 Mining and social change.

27 June – 1 July
COUNTRY HOUSE COMFORT & CONVENIENCE, BUCKINGHAMSHIRE, OXFORDSHIRE AND SURREY

Details from Heritage of Industry
info@heritageofindustry.co.uk

26 – 30 July 2016
ICOHTEC SYMPOSIUM 2016

Technology, Innovation, and Sustainability: Historical and Contemporary Narratives
 Porto, Portugal details
www.icohtec.org

6 – 11 September 2016
INTERNATIONAL MINING HISTORY CONFERENCE

Linares, Spain
www.mining2016linares.com

9 – 14 September 2016
AIA ANNUAL CONFERENCE, TELFORD

The Association's AGM and annual conference. See page 16 and AIA website for booking form etc

9 October 2016
BICENTENARY CELEBRATION OF THE STIRLING ENGINE

Waterworks Museum Hereford

29 October 2016
ROADS AND TRANSPORT CONFERENCE

Devizes Town Hall
 See page 23

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



Queen Street Mill, Burnley, Boiler Room – for how much longer?

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

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

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