INDUSTRIAL ARCHAEOLOGY NEWS

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THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

FREE TO MEMBERS OF AIA

AIA in the Netherlands • A future for local societies
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COVER PICTURE
Kinderdijk, Netherlands. One of the drainage mills at this World Heritage Site
Photo: Bill Barksfield

Europa Nostra UK nominates Queen Street Mill for the Most Endangered Sites List

Queen Street Mill Weaving Shed with 300 looms, now silent. *Photo: Marilyn Palmer*

Europa Nostra (Latin for 'Our Europe') is a pan-European organisation which contributes to the formulation and implementation of European policies and strategy related to heritage, runs campaigns to save threatened heritage sites throughout Europe and celebrates excellence through its various awards. In 2017, for example, one of these Awards, an EU Prize for Cultural Heritage, went to the five storey warehouse building at Cromford Mills in Derbyshire, which now serves as a gateway to this World Heritage Site as well as being used by local businesses.

In 2013, as part of their campaign to save threatened heritage sites, Europa Nostra launched *The Seven Most Endangered Sites Programme* with the support of the European Investment Bank Institute and the Council of Europe Development Bank. The purpose of this is to draw attention to the importance of the listed threatened sites and encourage solutions for their future to be found. The list is drawn up every two years, and the 2016 list included, for example, the Colbert Bridge in Dieppe, Normandy, as the last large swing bridge still operating in Europe with its original hydraulic mechanism, but which was threatened by lack of maintenance. Its inclusion on the list has aroused wider interest and led to a detailed financial and technical report on its future.

It was with this outcome in mind that the Association for Industrial Archaeology has been working with local experts to draw up a nomination for Queen Street Mill in Burnley, the world's last surviving cotton weaving mill still powered by its original steam engine, to be included in the 2018 Seven Most Endangered Sites Programme. With further support from the Newcomen Society and the Victorian Society, the nomination has been accepted by Europa Nostra UK and put forward by them for inclusion on the 2018 list. The Mill is not yet in a ruinous condition but since its closure to the public in September 2016 by Lancashire County Council as a cost-saving measure, neither the steam engine nor the machinery has been worked. This will in time lead to rapid deterioration, especially with the water-filled lodge alongside. The area is subject to vandalism and there have been numerous mill fires at disused Lancashire mills in the last few months, as reported in a previous issue of IA News. No site in the UK has yet appeared on these biennial lists of the seven most endangered sites in Europe, and we hope that the inclusion of Queen Street Mill help in finding a solution for the future of this unique site.

Marilyn Palmer

Peace, *the Queen Street Mill engine, complete but idle*
Photo Marilyn Palmer

An Uncertain Future – Industrial Archaeology, a post-war 'ology'

The Bristol Industrial Archaeological Society celebrates its fiftieth anniversary this year and Geoff Wallis, its President, has written about his pride in the achievements in its life so far but also the problems and challenges the Society will face in its future. This is published here in an abbreviated form as the issues are common to many of the Industrial Archaeology Societies including, perhaps, the AIA itself. Far from defeatist, Geoff continues with possible options as to how to go forwards and he suggests it would be welcome if this ignites a wide debate on the future of Industrial Archaeology.

Crofton Pumping Station

During the 1950s and 60s post-war period of clearance and reconstruction much traditional industrial plant was lost as industries such as coal mining, ship-building and textile manufacturing declined, or were modernized, resulting in great social, economic and landscape changes. At the same time disposable income and leisure time were increasing for most people, and the ability to travel grew with the widespread ownership of faster, more reliable cars and improved roads.

Driven by nostalgia and a concern that evidence of Britain's pioneering industrial past was being lost for ever, interest in local and industrial history developed, and 'industrial archaeology' was born.

In the words of an early member of BIAS, Michael Bussell, to whom I am indebted:

Thus began the discovery period – what the late and splendidly eloquent IA pioneer Kenneth Hudson described at the time as 'the honeymoon period' for IA, when we were literally discovering IA sites, both derelict and working. These discoveries were then enthusiastically shared via conferences and newsletters of local societies for IA and the like that came into being, stimulating further enthusiasm and recruits to the cause.

My own conversion to industrial archaeology came at this time. In 1969 I was a new aero-engineering apprentice at the Rolls-Royce Technical College in Filton. Three R-R engineers, Ian Broom, Ron Plaster and the late Roy Simmons, had just discovered the redundant Crofton Pumping Station near Marlborough, Wiltshire, and were determined to save it. They advertised for youthful help and I soon found myself in the beam engine's cramped underground condenser-cistern scraping off a century-thick layer of sticky black steam oil. Gazing up at the ancient engine I fell to wondering how the enormous, heavy parts had been designed, made, moved into the countryside before the canal was completed and hoisted into the top floor without modern lifting gear.

I was hooked, and spent four years restoring both beam engines to working condition and then joined the newly-formed Dorothea Restoration Engineers Ltd. The company were pioneers offering practical conservation services initially to the new industrial museums, then to owners of traditional wind and water-mills and to anyone with historic machinery or structural/architectural metalwork. The 1960s were exciting, energetic, innovative and commercially risky. We felt that we should preserve as much as we could and that with enthusiasm and energy we could make a difference.

The author starting No 2 Engine at Crofton having restored it as an apprentice.

Fifty years of BIAS

During its fifty years BIAS members have achieved much, working on their own, as a society, and with other groups. A vast amount of research has been carried out on subjects as diverse as chocolate, computers and church bells, resulting in hundreds of live presentations and over two hundred papers in the annual Journal which has become known for its consistent high quality and ranks among the best in the country. Summer programmes of visits have been made to interesting and important sites in and around the region. Our Bulletin has publicised reports on hundreds of sites, their activities, successes and needs, whilst also reporting threats, opportunities and triumphs.

The Society has 'offered an informed opinion' on many conservation and development matters, and campaigned on occasions. Members have been involved in many practical preservation projects including on industrial buildings, mines, canals, bridges, and pumping stations. The preservation of sites with no perceived economic future was catered for by the establishment in 1980 of the Avon Industrial Buildings Trust. Soon over £1 million was being spent on the reconstruction of Midford Aqueduct, and the Trust is currently developing a similar-sized conservation project on Bristol's Brunel Swivel Bridge.

The Society's achievements will rightly be celebrated during this fiftieth anniversary year, but the world has changed.

The world has changed

The last fifty years has seen a general increase in prosperity and a growing expectation that for most people this will continue. However, political and economic uncertainties at home and abroad have spawned a degree of scepticism, nervousness, and an aversion to risk. The fear of terrorism and litigation following injury has added to feelings of insecurity, although in recent

years mitigated by formalized assessment and management of risk, and curbs on the excesses of the claims industry. For industrial archaeologists the tightening of legislation has resulted in increased bureaucracy, raised insurance costs, and reduced access to sites, particularly working sites, even under escort.

Possibly the most dramatic change over the last half century has been the digital revolution. Home computers and portable devices now shape our lives as we rely on e-mails, social media, internet shopping, and leisure activities such as viewing downloads and playing interactive games. The internet has become a primary source of information, advertising and advice, rivalled only by a proliferation of radio and TV channels. With better computer-animated graphics and immersive technology (3D headsets) cyber-land is beginning to replace the real world, and the 'internet of things' is allowing us to work remotely.

Messages are not just delivered into our homes but into our consciousness with increasing efficiency. This can be a great threat to our specialised interest which risks being squeezed out, but it is also a tremendous opportunity if we engage with it fully and ensure we remain visible. The media needs interesting content and we have it in abundance.

The 2012 Olympic Games opened with a graphic portrayal of Britain's industrial history, and a vast amount of material about our industrial, maritime and transport past can be found on the media, including YouTube videos and television programmes. The interest in industrial history has never been greater, but experience through the media is 'second-hand' and relatively transient. Viewers are not necessarily motivated to develop a deeper interest, attend meetings or get involved in practical conservation. Overcoming this inertia is one of the main challenges facing the Society now, and more so in the future.

The intensity of modern life, especially the pressures of employment, has driven many to consciously seek a work-life balance. Leisure time has to be used efficiently, so activities such as shopping, sport, cultural interests, hobbies, volunteering, and visiting historic sites must compete with each other for attention, time and money. Shopping has been revolutionized by the creation of ever-larger shopping malls with integral facilities for eating, entertainment, and easy parking: a free all-weather experience for the whole family. The retail offering is glitzy, focussed on each season, perceived as convenient and good value for money. It has set the standard to which heritage offerings now have to aspire, and voluntary societies need to be similarly 'consumer orientated' to survive.

A young helper enjoys restoring Brunel's Swivel Bridge, Bristol

Change is the one constant

In the natural realm decline and death are endemic, but so is rebirth, the glorious antidote to annihilation, and the bringer of hope. Humankind may be locked into a cycle of birth, growth, maturity, and death but we have the ability (and duty) to guide the present, influence the future and promote the survival of what we believe to be important.

Organizations are subject to life-cycles too. As in the natural realm, organizations mature and decline, but life-cycles can be managed, and this we must do if we value our cause.

Maturity or Decline?

The Society fulfils its objectives through its activities and publications. The Journal is published regularly and is of high quality, but with a few notable exceptions most of the papers are from older contributors, often describing their life's experiences. This is admirable, but the Journal would be enriched by papers of a more contemporary nature, and will inevitably decline if younger authors are not actively encouraged to contribute.

The programme of lectures and visits is varied, informative, interesting, and generally well-supported by a core of perhaps fifty members. The Bulletin is packed with well-illustrated and attractive news of past and prospective events.

What we do, we do well, but it is not sufficient to ensure our succession. When I was appointed President of BIAS in April 2015 I asked members what they considered to be the most serious threat to the future of the Society. There was a consensus that it was the ageing profile of the membership.

Clearly encouraging next generation and inspiring them to action were fundamentals of the Society fifty years ago, and are arguably more critical now than ever, as the average age of the membership has risen, inevitably energy has waned, and the pace slowed. A generation gap has developed which has discouraged younger people from joining the Society, participating in activities, catching our vision, campaigning, preserving, and providing succession.

The Society has, in short, unwittingly become introverted. As one respondent observed:

'Each BIAS lecture/activity should have a clear purpose, along the lines of 'what do we want to see happen as a result of the presentation?' Currently most of them appear to be for entertainment rather than action. Is that what we want? Information rather than inspiration?'

What are our options?

1) Continue as we are. BIAS has a reasonable number of members, events are fairly well attended, people enjoy the activities, and the bank balance is healthy. In the short term there is no need to change, but the Society will probably be inactive and unsustainable within 20 years, and is likely to close down before its centenary.
2) Wind up the Society. Voluntary societies have natural life-spans and do not last for ever. If outreach, engagement and rejuvenation are not attempted or prove unsuccessful, the Society will eventually become quiescent, so it is perfectly honourable to wind it up.
   We don't like to think of the demise of anything, but we have to recognize that a well-managed death may be the best we can achieve.
3) Establish a new Society. Industry and its history are interesting, important and ever-changing, and people are endlessly curious, so if BIAS ceases to exist another organization might subsequently be created to take its place. We have the option of founding that organization ourselves, funding its early days and encouraging younger people to run it, focussed on the subjects that interest them. A core of no more than perhaps half a dozen enthusiastic people would be required to start a new society, and the effect on the present operation could be dramatic.

Midford aquaduct *Google images*

4) Rejuvenate. If we want the Society to outlive us we need to recognize the mature nature of the organization, rejuvenate and implement a succession plan. We need a courageous, radical and visionary reassessment of:

Our constitutional aims/objects. What can the Society do to serve the interests of the IA heritage of the Bristol area in the future? The BIAS constitution, drafted in 1976, may need to be amended.

Our activities. How can we best fulfil our (revised) constitutional aims? How can we influence those who control the preservation and re-use of sites? What will they need? What will attract, inspire and retain BIAS members of the future? What activities are currently of interest to working-age people, families and young people, and the recently-retired?

Leadership. What skills do we need on the Committee? Where are these skills, how can we engage with the people who have them, and eventually co-opt them?

Renewed vision

We need to develop a clear vision of what we are trying to achieve and, how we plan to do it.

The following is far from coherent or complete, but a starting point for discussions and action by the membership and leadership:

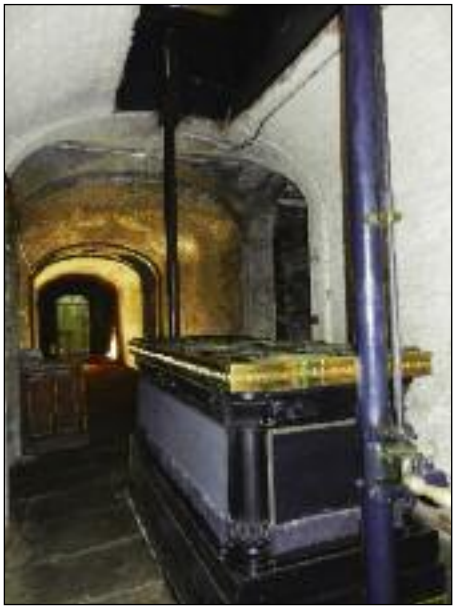
- Encourage advocacy and practical conservation projects. Active involvement attracts the interest of all age-groups and offer huge potential for growth in the Society whilst also popularising, publicising, and protecting sites;
- Recognise that the Society's future will be concerned with today's industries not limited to our traditional studies;
- Engage with younger people by providing first-hand experiences tailored to their needs and interests. These might include site visits, practical conservation work, and engaging, inspirational presentations;
- In our research and publication place, more emphasis on the social and economic history of industry, and less on its hardware. Focus more on people and their achievements;
- Make awards to recognize and encourage good conservation, successful reuse of industrial sites and volunteer achievement. This will encourage good practise and publicize the Society;
- Change the Society's name. Bristol Industrial History Society might be a better name than BIAS, which has unfortunate connotations and focusses on 'archaeology';
- Revise the Constitution to encompass wider aims.

Delivering change

It is always easier to analyse the past and present than to determine a wise, practical strategy for the future, particularly in an organization that relies on the good-will, energy and time of volunteers.

Clearly the priority is to recognize the need to act. The Society's leadership needs to take the initiative in developing a new vision, and ensure that members buy into the process of change, as it is they who will have to deliver it.

The Committee should consider establishing a 'development group' with executive powers to define the needs, the options and deliver the new initiatives. A strategy for rejuvenation should contain not just generalities but specific projects with clear objectives so that progress can be monitored.



Dorothea – catafalque Restoration, Kensal Green Cemetary

Inviting suitable individuals to take on specific tasks is often the best way of motivating people and securing help.

The regeneration process may be protracted and divisive, and will demand strong leadership, but change can also be exciting and rewarding, and if successful will reinvigorate the Society. More importantly it will promote better study and preservation of the industrial heritage of the Bristol region, which is what the founders of the Society envisaged.

Succession-planning and rejuvenation, can it work?

I have two examples from my own experience.

Above I explained how I came into conservation from the aircraft industry, initially as a volunteer and then a professional. After two decades directing Dorothea Restorations Ltd, my business partner and I started to plan our succession. Exiting from a small owner-run company is difficult because the expertise is perceived to rest with those who are due to depart, leaving a potentially fatal deficit, so we had to plan our exit. We advertised for a 'manager aspiring to director' and soon appointed a capable younger person who we trained over the succeeding years to replace us. The Company was sold successfully and continues to thrive.

A different but equally successful strategy has been adopted by the National Heritage Ironwork Group. Established in 2009 by mature practitioners, the council of management made a policy decision to involve younger people as some of the founders approached retirement. Mid-career practitioners and professionals were invited to fulfil key roles under the chairmanship of one of the 'founding fathers'. This offered welcome opportunities to the newcomers whilst relieving the older generation of some of the workload. Successful regeneration has been achieved over about five years and has reinvigorated the Group.

Under the BIAS Constitution the responsibility for initiating and delivering strategic changes rests with the committee and officers.

Sowing seeds

The generalization that 'young people are only interested in computers' is not true. Many voluntary organizations such as traction engine and historic vehicle clubs, canals, volunteer railways, and many museums have a healthily mixed-age following. The National Trust offers working holidays for older teenagers, the SPAB Mills Section encourages youthful involvement with their annual 'Young Millers' Day' and English Heritage's well publicized family activities are popular. However, creating interest in newcomers can be a diffuse, often frustrating process wherein people may be active for a limited time and then move on. This may be discouraging but can bear fruit later and we must expect this delay.

Conclusion

It is reported that more people are joining than leaving BIAS, but membership stood at around 400 a decade ago. The average age of the active membership of the Society is now over 65, and rising. A number of key activists have sadly passed on in recent years and are greatly missed. Regrettably this depletion will inevitably continue, making outreach to younger people more urgent with every passing year. We need to work out how to do this, take bold, strategic decisions, inspire younger participants, and encourage them to take on tasks and leadership roles.

The whole thrust of our BIAS@50 celebration must be to look forwards. Of course we must celebrate our achievements, showcase the dedication of our forebears, and demonstrate how we have made a difference. But more importantly we must also inspire the next generation with enthusiasm and energy, engaging people of all ages. In sum, we must celebrate the last 50 years, inspire the next 50 years and create a future for BIAS.

G. J. O. Wallis C.Eng. MIMech.E ,
President, BIAS

AIA members and other readers would be very welcome to take up this debate. Please email aianewsletter@btinternet.com – the next copy date for the *IA News* is 30 September.

A fine partnership: Worthington-Simpson

It is sometimes strange what brings two companies together. Often it is a financial reason but in the case of Henry Worthington (New York) and James Simpson & Co (London) it was the demands of war.

In 1885 a British Army Expeditionary Force set out to relieve General Gordon in Khartoum. The army required ten large water pumps which neither Worthington's nor Simpson's could supply alone and so they came together for this one-off order. The pumps were made and supplied to the front. In the process the two firms found they could work well together and thus was created the embryo of a union which was to flourish well into the future.

Worthington-Simpson engine on display at Hereford Waterworks Museum

James Simpson

In 1799 James was born in the Engineer's House at the Chelsea waterworks where his father, Thomas, was the chief engineer. James worked and learned under his father's direction and in 1823, on his father's death, inherited the position of chief engineer to both Chelsea and Lambeth waterworks.

Concerned about the current water filtration systems, James set out to improve the situation and developed the slow sand filter. In 1829 he completed a one acre filter bed at the Chelsea waterworks. Among many other achievements he advised on the water systems for Cambridge, York, Amsterdam and Copenhagen. In 1850 he assisted with the design of Cardiff waterworks and the Simpson beam engine on display at the Waterworks Museum – Hereford was installed at Cardiff in 1851.

His civil engineering interests were wide and he was consulted for advice on many undertakings apart from drinking water. Notably he designed and directed the construction of Southend pier.

With other members of his family he had set up a manufacturing business in Pimlico and this became James Simpson & Co. Their early speciality was the design and construction of beam engines, many of which were constructed under licence by Harvey's of Hayle in Cornwall for the mining industry. In 1901 James Simpson & Co set up a factory at Newark-on-Trent in Nottinghamshire.

Henry Rossiter Worthington

Born in New York City in 1817, Henry was the oldest child of a flour mill owner, and the sixth generational descendant of Nicholas Worthington who emigrated from England in 1650.

He sought employment as a hydraulic engineer at a very young age and concentrated his attention on the problems of urban water supplies. This did not stop him from working on other water-related matters and his first patent (1844) was for an automatic boiler feed pump used on canal tugs.

He perfected a series of inventions during the next few years culminating in the direct-acting steam pump which won universal acclaim (invention number 13, 1855). The Waterworks Museum – Hereford has on working display historic examples of boiler feed pumps and direct-acting steam pumps.

Henry established a plant for pump manufacture in Brooklyn, New York, in 1859. He went on to develop improved pumping engines and contributed many innovations to the pump industry and to mechanical engineering in general and worldwide. The United States Navy used Worthington pumps for bilge water ejection on various ships during the American Civil War. Henry Worthington died in 1880 and was succeeded by his son Charles Campbell Worthington. The company left Brooklyn in 1904 and moved to Harrison, New Jersey.

Coming together

After cooperating in the supply of the ten large pumps for the British Army in the Sudan, an agreement was signed for James Simpson & Co to manufacture Worthington pumps in Britain and the pumps would be sold in the British and colonial markets.

In 1903 the London based Simpson and Worthington companies merged to become the Worthington Pump Co. They were immediately involved in supplying large pumping engines for waterworks and mine drainage.

Over the following few years the American associates gained full control of the company and in 1917 the company name was registered in London as Worthington-Simpson Ltd. The firm was one of the leaders in the design, manufacture and supply of engines and pumps for the remainder of the twentieth century.

The company designed and built two massive triple-expansion steam engines in the late 1920s for Kempton Park waterworks. Kempton Steam Museum has restored one of the engines which can be seen working on open days. The triples each produced 1008 hp, pumped 19 million gallons per day against a 200 foot head and are the largest ever built in the UK.

In 1939 at Brede waterworks in Sussex a new building was constructed in the art deco style to house a large triple-expansion steam engine. This engine was built by Worthington-Simpson at Newark in 1940 and was the last of its type supplied by the company. This is the engine seen during the 2015 AIA Conference.

Centenary celebration

The Waterworks Museum – Hereford is celebrating the centenary of the founding of Worthington-Simpson Ltd by creating a new exhibition which opened on 28 May. All the Museum's historic exhibits made by Worthington-Simpson Ltd, and by companies directly related, are on special display.

Through a number of mergers and acquisitions, Worthington-Simpson Ltd was subsumed into one of the world's largest companies involved in the supply of pumps and related products to the power, oil, gas and chemical industries. This is the Flowserve Corporation of Irving, Texas, which has supported the Museum's centenary celebrations.

The guest of honour at the opening of the centenary celebration was intended to be Candia Compton, Trustee of the Southall Charitable Trust, which has supported the Waterworks Museum since its founding in 1974. Regrettably, Candia's mother, Philippa Southall, the President of the

Waterworks Museum, passed away in her sleep a week earlier, aged 92.

On the day, the Worthington-Simpson Centenary Exhibition was declared open by Dr Noel Meeke MBE, Chairman Emeritus of the Museum. Dr Meeke thanked all the Museum volunteers who had played a part in bringing the Worthington-Simpson exhibition to fruition in a very tight timescale. He further noted the external contractors who had cooperated assiduously to the same end and expressed special thanks to the Flowserve Corporation for their unstinting support. Over the long weekend the Museum received some 300 visitors to see the new exhibition.

The Museum is always seeking to involve children in its activities and a dedicated children's trail was created to find all the exhibits on site relating to Worthington-Simpson. A successful trail hunt resulted in a special badge designed for the occasion. The Trustees believe it is important to encourage all children, boys and girls, to consider a career in engineering or science. With its many hands-on activities the Museum is an ideal and safe environment for children to put thought into practice.

The Worthington-Simpson Centenary Exhibition will remain open until the end of October. For open days and times see the Museum website: www.waterworksmuseum.org.uk.

Family Group at Worthington-Simpson display

Fison's warehouse in a sorry state

Suffolk as a rural county can't boast industrial remains on a scale to equal Shropshire, Leicestershire or London, but it has more than might be believed. As one might expect, the majority of the major businesses were established to supply the county's agricultural industry or process its products.

John Jones

One example is the fertiliser industry, established to produce superphosphate fertilisers as an improvement on the guano or crushed bones used previously. The world's first complete superphosphate factory was built at Bramford, near Ipswich, in 1851-4 by Edward Packard. Situated next to the Gipping Navigation and near the Eastern Union Railway, it had excellent transport links. Shortly afterwards Joseph Fison constructed the Eastern Union Works on an adjacent site. Subsequently the two companies merged, to become the forerunners of the Fisons agrichemical and pharmaceutical business. The Bramford site continued in use for fertiliser manufacture until it closed in 2003.

The earliest building now standing is the North warehouse, part of Joseph Fison's 1858 development. It is listed Grade II and is of four storeys, timber-framed with weatherboard cladding apart from the West elevation, where the ground floor and part of the upper levels is in brick. The roof is curved, on a metal frame, with boarding covered in bituminous felt.

Fison's warehouse, Bramford , Suffolk – West elevation. *Photo John Jones*

A planning application was submitted in 2012 for redevelopment of the site for mixed residential and business use. Most of the later buildings were to be demolished and replaced by housing, while the listed warehouse would become small business units. Consent was granted, but so far work has not started.

Bramford Parish Council submitted a carefully-argued comment on the planning application and included a recommendation that a condition should be imposed requiring temporary repairs to be carried out immediately on the roofs, which were already leaking, to prevent further deterioration of the structure. Suffolk Preservation Society made a similar recommendation in their submission, but both were ignored by the planning authority.

Five years on, time and weather have taken their toll and the buildings are now in a sorry state. There are gaping holes all over the roofs and the damage to the interior must be extensive. Representations to the planning authority by concerned neighbours have proved fruitless and it seems only a matter of time before this building, despite its Grade II listing, will be lost.

Canal and River Navigations National Overview

The Historic England website has recently added a Research Report: *Canal and River Navigations National Overview: an appraisal of the heritage and archaeology of England's present and former inland navigable waterways.*

The navigable inland waterways constitute an immense heritage resource that has developed over several centuries. It is a resource that has changed in its use from a privately and commercially developed transport system for heavy goods to a public leisure and heritage resource enjoyed by a wide range of users. It has been subject to periods of great expansion, prolonged decline, contraction and then renaissance. It has witnessed an extraordinary triumph of voluntary enthusiasm and campaigning zeal over official disinterest and obstruction. From years of neglect, abandonment, dereliction and turmoil, a slimmed down waterways system which, through a remarkable partnership of official agencies working with voluntary bodies and with the support of Lottery funding, has emerged as a national treasure.

The 650 page Overview, written by the AIA's current Chairman Keith Falconer, is illustrated by some 1000 images and is in two parts with three appendices.

Manchester Ship Canal Eastham Locks under construction Waterways Archive

Part One, Section 1 records the transformation of the system by chronicling the growth of public awareness of its value as demonstrated by the literature, both academic and campaigning, that informed and fuelled the transformation. It shows how early interest in the 1940s and 1950s led, through detailed research, to a comprehensive public appreciation of the historical framework of the system by the 1970s which encouraged Government departments to re-evaluate their approach to its management. Subsequently, the literature has swelled enormously, providing more detail, more images and the historiography of the restoration movement.

Part One, Section 2 traces the salient historical periods in the development of the system and discusses the heritage legacy of each of the periods. It outlines how, by the end of the eighteenth century, the emphasis on traditional river navigation had been supplemented, and to a degree supplanted, by the growth of an artificial canal system which by crossing watersheds became the arteries of the Industrial Revolution. It shows that these early canals have to a great degree generally survived to leave a more

Ellesmere Port

substantial heritage than those of the nineteenth century, though some of the latter canals have left a significant archaeological legacy.

Part One, Section 3 considers the infrastructure of the system feature by feature and examines the current state of designation of these features. It highlights the discrepancies in protection between types of features and seeks to identify key features that have not been assessed for designation and appraise their significance.

For those parts of the waterways system that are managed by the Canal & Rivers Trust it finds a fairly satisfactory situation as almost all of the significant aqueducts, bridges and tunnels are designated as are most of the significant associated buildings. Protection extends to many of the more mundane structures; thus, for example, some 650 locks out of 1600 are listed and about 800 traditional arch masonry bridges out of 5000. Many mileposts are listed, though the coverage of these seems less comprehensive, while water supply features have attracted considerably less attention. In all, the CRT has 43 Scheduled Monuments and some 2475 Listed Buildings on its estate in England and it also maintains a condition-based database that contains information on many thousands of other historic sites in its ownership that are undesignated.

Dry Dock Chester Canal photo Keith Falconer

On those parts of the system that are not managed by the CRT the situation is much less clear. Desk-based research, combined with a search of the National Heritage List for England, indicates that many of the most substantial features of historic interest are designated but less obvious features, though of considerable archaeological significance, are less well protected. Indeed, for long-abandoned canals field verification of literature and internet references may be necessary, while for non-CRT navigable waterways consultation with owners such as the Environment Agency, allied with field verification, may produce satisfactory results.

Part One, Section 4 Initial Findings and Conclusions summarises the salient points that emerged from the previous three sections: the extent to which evidence for how the system evolved has survived to be an unrivalled national heritage resource; how the historic decline in the fortunes of the system was reversed by a transformation in the national appreciation of the waterways; how the comprehensiveness of protection of the system varies by ownership, by type of structure and by status – whether navigable or abandoned. It suggests that further work is needed to establish what survives of significance of the earliest types of locks, lifts and inclines and of the BCN's many abandoned branches. It also draws attention to the under-designation of the engineering masterpieces of the Manchester Ship Canal. Lastly, in the context of the

Tunnel and Cleveland House, Sydney gardens, Bath

current discussion about the possible transfer of Environment Agency waterways to the CRT, it suggests that an audit of the heritage assets of these waterways is needed and that the heritage must be regarded as a priority to rank equally with other waterways interests in these deliberations.

Part Two, the Gazetteer, is arranged alphabetically and covers the heritage of some 200 canals and navigations operating in the nineteenth century as identified from the main contemporary reference books. Summarising the history of each waterway it seeks to identify and assess their significant surviving structures and historic buildings to come up with a comparative score of 1 -5. It has three Appendices:

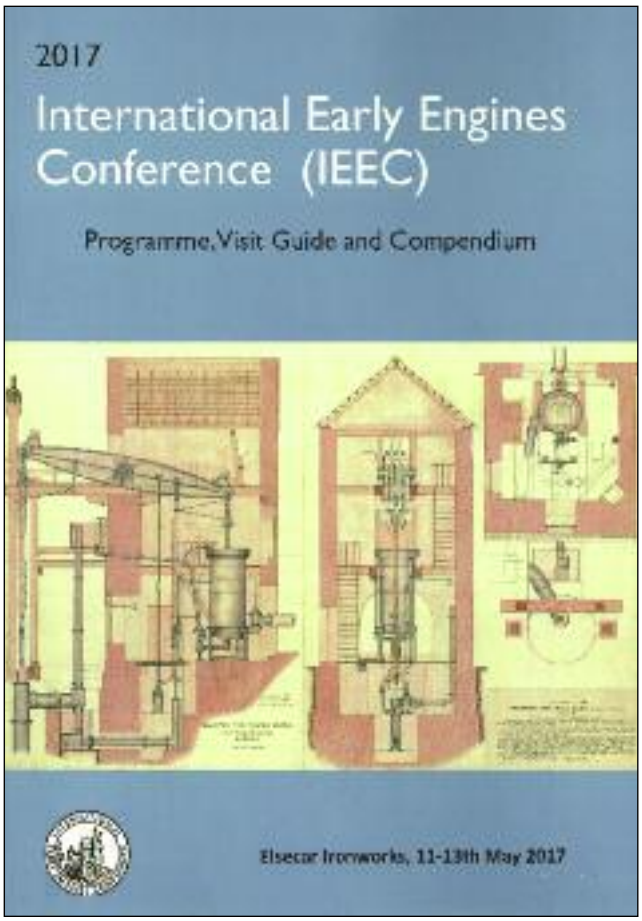
Appendix A alphabetically lists the waterways covered by the Overview with their ownership.

Appendix B provides a list of designated sites with their grade and the National Heritage List for England number for each of the waterways covered by the Overview.

Appendix C Canal Reservoirs is a 2008 article kindly provided by David Henthorn Brown, formerly of British Waterways, giving details of the development of canal reservoirs in Britain and the date and size of the reservoirs in the responsibility of British Waterways in 2008. These are now mostly managed by the CRT.

The Overview itself can be downloaded as PDFs at: http://research.historicengland.org.uk/Report.aspx?i=15602

International Early Engines Conference
Elsecar Ironworks, 11-13 May 2017



Inspired by the ongoing success of the Early Railways conferences, a small group of researchers with an interest in the history of stationary steam engines decided to organise a conference focusing on the early years of development before James Watt's invention of the separate condenser, i.e. the era of the atmospheric engine invented by Thomas Newcomen. This initiative was supported by the Newcomen Society, Historical Metallurgy Group, Northern Mines Research Society and South Gloucestershire Mines Research Group.

Ian Mitchell

The chosen venue was Elsecar Ironworks in Yorkshire, a good choice for several reasons. Elsecar has recently been designated as a Heritage Action Zone by Historic England, and one of the former ironworks buildings provided an excellent space for the lectures, bookstalls and catering all under one roof, a short walk from the world's only surviving Newcomen engine to remain in its original engine house. The conference ran from Thursday mid-day to Saturday mid-day, a slightly unusual format but it proved to be very successful, giving those attending plenty of time to get to and from the conference, and the opportunity to attend two enjoyable evening events.

Over the 48 hours of the conference, more than 20 papers were presented. They ranged from pure historical research, to archaeological excavations, conservation of surviving engines, and even construction of a new one. A theme that was apparent in a number of presentations was how rapidly Newcomen's invention was adopted for pumping water out of both metal mines and coal mines, with several hundred constructed during the eighteenth century. Another was how long the older technology persisted – in coal mining areas where engines could burn virtually unsaleable slack coal, the extra complexity and capital cost of the more efficient modern engine was not justified, and new atmospheric engines continued to be constructed into the nineteenth century.

There are too many papers to list in full but some of the highlights were:

Geoff Wallis on the preservation of the Elsecar engine, and some of the dilemmas of conservation and restoration;

Papers dealing with two eminent eighteenth century civil engineers who also built Newcomen engines – Rick Stewart on Smeaton, and Victoria Owens on Brindley;

Descriptions of excavations on engine house sites, with remarkable surviving underground evidence – by John Barnett, Mike Nevell and Steve Grudgings;

A fascinating story of detective work to tie down the construction date of a surviving engine house at Brislington near Bristol. Previously thought to be constructed about 1790, it turned out to be already disused by then, and documentary research pushed the date back to before 1740. Finally it transpired that the roof timbers were suitable for tree-ring dating, and David Hardwick finished his talk with a triumphant first public announcement that construction date is actually 1737;

Ken Pointon, describing how he built the first working Newcomen engine in the southern hemisphere – this resides in his back garden in New Zealand, but is designed to be dismantled and temporarily erected elsewhere for exhibitions.

The programme for the event was published as a substantial book, incorporating a compendium of published papers on early engines. There were also a number of bookstalls giving the chance to buy a wide range of relevant material. A couple of the authors had cunningly arranged for their new books to appear in time for the conference – *Mine Pumping Engines in 18th Century Cornwall* published by the Trevithick Society, and a beautifully produced reprint by Steve Grudgings of *Notes on an Old Colliery Pumping Engine,* a 1917 paper read to the Institution of Mining Engineers that described the engine at Fritchley Colliery in Derbyshire (this is the Newcomen engine now in the London Science Museum).

On the first evening food was provided at a pub very close to the conference venue, with a number of activities before and after. There was a chance to see the restored Elsecar engine in operation – actuated by a discreetly hidden hydraulic cylinder, with a wireless remote control (is this a first for a beam engine?). Also, a walk along the Elsecar branch of the Dearne and Dove canal to the former Hemingfield Colliery site,

Headgear at Hemingfield colliery

recently purchased by a local enthusiast group – a fascinating site with pumping, winding and ventilation buildings and equipment of various ages, but in a woefully neglected state. And finally, there was a chance to join a guided walk around Elsecar village to see former mining and ironworks sites, industrial housing and stone sleeper blocks along the course of a mineral railway.

The meal on the second evening was at Wortley Top Forge, a water power site preserved by the South Yorkshire Trades Historical Trust. Alongside the original forge equipment, a wide range of engines and machines associated with local industries are displayed, and many of them were working with compressed air during the visit. There was even a chance to ride on a miniature railway running alongside the river.

The attendance at the conference, and the number and quality of the papers, demonstrate the level of interest in the subject, and the organisers are to be congratulated on a very well organised event. The presentations will be written up as papers and published next year, and it is hoped to hold another conference in a few years' time, possibly based at the Black Country Museum, which is the home of a working replica Newcomen engine.

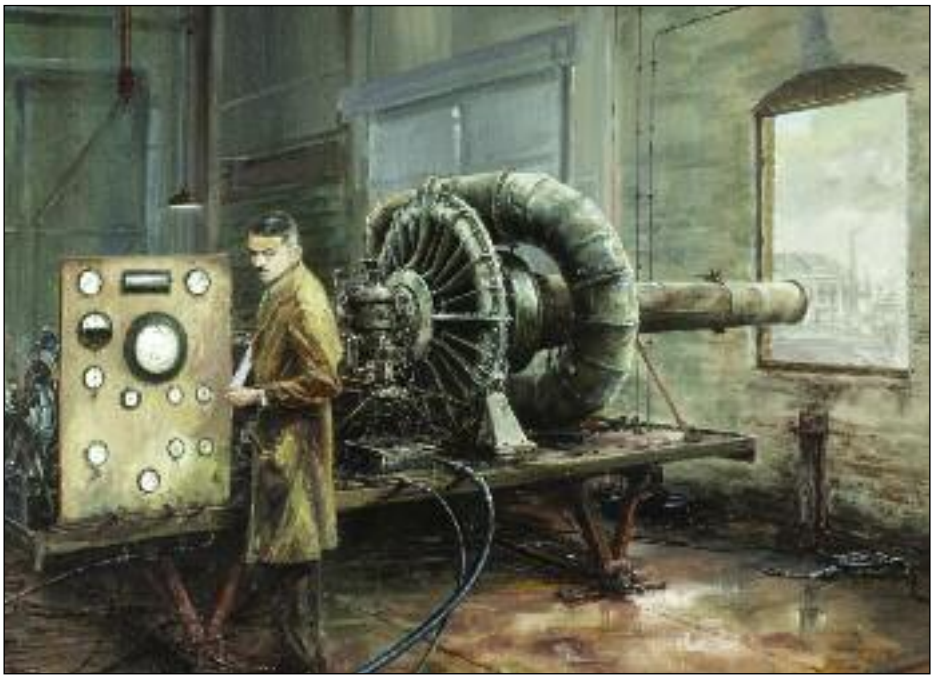
80 Years of the Gas Turbine Turbojet

Brownsover Hall, Power Jets Ltd war-time office

On 12 April 2017 the Warwickshire Industrial Archaeology Society organised a celebratory lunch at Brownsover Hall, former wartime headquarters of Power Jets Ltd., to commemorate the 80th anniversary of the world's first operational run of a gas turbine turbojet engine by Frank Whittle at the British Thomson-Houston Works, Rugby on Monday 12 April, 1937. Following a visit to GE, Rugby (current occupants of the BT-H site) and to the spot as near as possible to where the test took place, the lunch was attended by Ian Whittle, Sir Frank's son and Sir Alastair Dudley-Williams Bt, son of Sir Rolf Dudley-Williams, one of Power Jets original backers.

Eighty years ago, on 12 April 1937, a steam turbine assembly hall at the British Thomson-Houston works at Rugby resounded to a previously unheard sound, the ear shattering whine of a totally new form of aircraft propulsion unit – the gas turbine turbojet. At the controls of the revolutionary engine on that day was its inventor, Flt Lt. Frank Whittle, a serving RAF Officer. It was the practical outcome of an original concept formulated by Whittle some seven years previously, but rejected as impractical by his mentors at the Air Ministry.

Quarter scale model of the Whittle W2 700 engine and Gloster E28-39 aircraft brought by Frank Whittle's son Ian to the lunch at Brownsover Hall



The Original Whittle Jet Engine by Roderick Lovesey *Courtesy of IMechE Archive*

The engine, designated the Whittle Unit (WU), was mounted on a test truck situated on a gantry structure above the main steam turbine assembly hall, with the jet efflux pipe projecting through a window from which a pane of glass had been removed. As a safety precaution thick sheet steel screens had been erected on either side and above the engine, to contain any debris that might be expelled from it in the event of a catastrophic over-speed failure. Additionally, also for safety reasons and not without a degree of resentment, no senior personnel from BT-H were allowed to be present at the first test run.

To say that the actual test run on 12 April had its share of problems would be something of an understatement! The electric starter was used to raise the engine speed and with the ignition active, Whittle then began to open the main fuel control valve. Initially, with a low growl, the engine began to accelerate. But instead of obeying Whittle's control of the fuel supply, the speed began to rise with the growl changing to an alarming whistling shriek, described in Whittle's notes as sounding like an air – raid siren. Ominous large patches of red heat also started to appear on the combustion chamber casing, and Whittle watched with horror and disbelief as the speed rose – the engine was totally out of control.

All those present except Whittle made a rapid retreat, taking cover wherever they could! Whittle observed the engine speed peak at 8,000 rpm and then, with immense relief, watched it begin to drop. The shriek died down to a reluctant growl and ceased as the engine came to a standstill. The personnel who had absconded, sheepishly returned to their posts. Later Whittle confided in his notes, 'Needless to say, this incident did not do my nervous system any good at all'.

So this was the world's first somewhat eventful run of a turbojet engine. It was to be the precursor of many more alarming tests. A considerable amount of further development work was required to bring the unit to a state where it could be installed and flown in an aircraft. This condition was not attained in Britain until 15 May 1941, when the experimental Gloster-Whittle E28/39 piloted by Gloster's chief test pilot, PEG (Jerry) Sayer, successfully flew at RAF Cranwell, Lincolnshire.

John Willock

AIA Spring Tour 2017 to Randstad, Netherlands

A capacity group assembled at Sassenheim (Saxon home) so, with apologies to our few Celtic colleagues, this becomes an Anglo-Saxon chronicle. Host Jur Kingma gave a colourful introduction of what was to come among the polders of Holland, all so far below sea level.

John Copping

Approached through fading bulb fields, the first water supply pumping station at Leiduin is now a fascinatingly informal museum. One discussion centred on the use of a wooden framework apparently made to create the casting mould for a spherical valve-housing over six feet high. Heritage architect and new mother Jasmina drew attention to the slanting edge-lines used by the Netherlands architect Max Huut. Some questioned but also admired the use of polished black marble corbels to support the overhead crane tracks in an elaborate pumping station by Frank Lloyd Wright. Cruquius pumping station is an ERIH anchor point. Ordered from Harvey & Co. of Hayle in Cornwall, although not all made there, it has the largest low pressure cylinder ever cast and is the largest beam engine ever built. The eight beams each lift, simultaneously, a cylinder of water some four feet diameter and six feet deep from the polder below to the drainage canal above. At Halfweg, the team of mature volunteers had one of the two furnaces in steam powering their pumping engine. The coal is apparently imported from South America, as its quality ensures very little ash. Many of us admired the six wide paddle-wheels that originally scooped water from the lower level over a lip into the basin just two feet above – the weir between has since been removed. The final call at the museum De Zwarte Tulp brought us back to bulbs. We watched the comprehensive history of the tulip on film, including the tulip mania of the seventeenth century; read Dumas' book *La Tulipe Noire* to learn more.

Inside the Cruquius Pumping Station

Leiduin Pumping Station by Frank Lloyd Wright

Kinderdijk is another world heritage site, a score of huge drainage windmills along the either side of a waterway creating an unforgettable impression. Those on one side are of 1838 and brick clad. Those opposite are similar, but dated two years later and interestingly their walls are clad with reed thatch. These substantial houses were permanently occupied as the safety of the local population depended on the diligence of the owner. In wind or storm signals were sent by the positioning of the sails. A smaller post-mill declared its earlier date but proved inaccessible. The boat trip to Rotterdam, passing the Hef , the huge lattice lift-bridge retained after decommissioning by pressure from the local community, provided the opportunity to view industrial sites, but also to study the industrial junk jettisoned by businesses in their 'back yard' by the water-front. The fine buildings of the Rotterdam Drydock Company (RDM) were impressive, offering three grades of entrance, including the marble hall leading to two board rooms – one for directors and one for commissioners. The largest ship-building hall is

Cruquius Pumping Station

Engine at Halfweg

now a centre for university/company collaboration, said to be one of four such in the world. It has conveniently adopted RDM, which now stands for Research, Design and Manufacture – note the language used. Many were looking forward to the visit to *SS Rotterdam,* possibly because they remember her being commissioned. The main interest was not the hotel, nor the art, not even the bar, but the engine room. Reassuringly, there was consensus that the two spare propeller shafts would not be installed at sea. Some gave special attention to the mechanism for projecting the substantial shafts of the stabilisers, fitted apparently for the first time on this vessel. Hembrug, a major ordnance site of the late nineteenth century fronts the North Sea Canal, opened in 1876. Closed in 2003, it is steadily being developed as a heritage site. The group was permitted access – H&S appears positively managed in Holland – to a heavily eroded headquarters building shortly to be re-roofed and made sound ready for eventual internal re-fitting to suit occupiers seeking accommodation with front windows around five metres high. The Lassie mill processes rice – some maybe for dog-food. AIA visited this in 1996 when it was derelict, so it was pleasing to see it in full production, with a warehouse extension carefully designed to appear congenial. An owner sympathetic to heritage has left the attic storey void, permitting study of the roof structures of different phases of build. It was learned that heat generated by collision of fast-moving rice particles in the labyrinth of tubes is sufficient to warm the whole building in winter. The issues in summer were not pursued.

Another interesting boat-ride preceded a division of the group. The A team visited the Ooievaar (Stork) oil mill of 1622, moved in 1669 and now owned by the Zaan windmill society. There were once hundreds of oil mills in the Zaan area, pressing linseed, colza and hemp seed. From 1897 the mill processed cocoa waste from the cocoa and chocolate factories.

The B team visited the wind paper-mill De Schoolmeester, well explained by the resident paper-maker Arie Butterman. Of thirteen workers doing twelve hour days six days a week, four converted natural fabrics into pulp. As they could only produce when there was wind there was an intermediate stock-point for the shredded fibre. The others laid, compressed, dried and re-pressed the paper. Until the new woven-copper conveyor-belt on powered rollers was installed in 1886 (and later electrified) two men produced 1500 sizeable sheets per day, one lifting the suspended pulp from the water tub onto a gauze frame, the second turning it onto the rack to drain. When two hundred sheets were needed within a day to print the US Declaration of Independence in 1776, it was Zaan paper that was used.

The sea-lock near Gouda is one of just three of so-called fan-type. Dealing with tides of over four metres, the two fan gates protect the lock when filling at peak tide. Boats longer than the lock may pass through with the gates open when levels are equal, so the lock-operator must not be forgetful. Cultivation of hemp and rope-twining were naturally important in Holland from the sixteenth century. The rope-works at Oudewater, 350m long, still produces rope, typically just 220m of it when twisted, but rarely now of hemp.

The tour moved on to Utrecht where the waterways configuration has been influenced by the movements of the Rhine and the logistics of industrial development. Members of the group enjoyed walking tours embracing the old Mint and a fine wind-powered sawmill.

The afternoon seminar on the theme of adaptive solutions for disused large industrial sites was held jointly with FIEN (the Dutch equivalent of the AIA) and also attracted delegates from other IA organisations in the low countries. The location was Cereol Fabrik (itself a reused industrial building) and speakers made presentations about the many different approaches which may be taken to preserve such sites whilst giving them a credible modern use.

Speakers included: Erik Nijhof, chairman of FIEN; Dora Chatzi Rodopoulou a lecturer and PhD student at Delft University of Technology; Peter E. van Schaik Director of the urban development company BOEi; Mark Watson, Deputy Head of Industrial Heritage at Historic Environment Scotland and Amber Patrick Endangered Sites Officer at the AIA.

The seminar was a first for the AIA Spring Tour and was very well received. The organisers of future Spring Tours will be looking for

Flood barrier built after the 1953 floods at the mouth of the Hollandse Ijssel River

opportunities to repeat the feature if suitable themes and speakers can be identified.

The final day started with a visit to just such 'disused large industrial site', perhaps still struggling to reach the sustainability apparent in a couple of earlier ones. Despite a rain shower at an adverse moment, the four 'watches' enjoyed exploring the torpedo recovery ship *HMS Elfin,* built at East Cowes in 1933. Along with its companion, a tug/icebreaker from the Kiel Canal, built in what is now Poland in the days of Kaiser Wilhelm II *HMS Elfin* is looked after by a group of enthusiastic volunteers including an Englishman.

The Defence Line of Amsterdam, now a World Heritage site, was built 1880-1914 as a ring of 46 forts some 10km out from Amsterdam, permitting the flooding of the external polders to protect the city. The fort near Veldhuis is home to an aerial warfare museum that presents excavated objects from World War II along with documents and stories on the research. Lunch was served in an underground bunker within twenty feet of a V1 rocket. Another atmospheric bunker housed items recovered from a Stirling bomber, BVC710, recovered from the then Zuiderzee. Identifying the aircraft permitted identification of the crew, generating other related artefacts. Particularly poignant was the sensitively worded letter from the crew's senior officer covering the fact that the recipient's crew-member was missing, but of course not knowing whether he was dead or bailed out and either captured or protected by the Dutch underground. The story was presented by a young man approaching his eighteenth birthday and shortly to join the military. He remarked with visible emotion on their parity of ages. Our last visit was to the lock complex at the North Sea end of the Amsterdam Ship Canal. Prior to that an enjoyable steady circuit by steam train of the huge Tata steelworks provided the joy of observing a traditional industry still in production.

A well organised and most enjoyable visit in the tradition of previous tours; Bill Barksfield through his company Heritage of Industry, Jur and associates served us well, as did the weather.

In mid-May 2018 we are planning a tour to Saxony centred around Dresden and Leipzig. We plan to take in the metal mining region of Erzgebirge, the brown coal area of Lusatia, the famous paddle steamers in Dresden, the ribbon weaving town of Großröhrsdorf, the Saxon Railway museum and we may take the Fichtelbergbahn narrow gauge steam railway to the highest town in Germany. Visit the website http://industrial-archaeology.org/ where more details will be published as soon as possible

SS Rotterdam – Exploring below deck with a former crew member as guide

SS Rotterdam spare propeller shaft – (centre) actual shaft behind

HMS Elfin

All photos by Bill Barksfield

The Ryde Pier Tram Project

For over 100 years, from 1864 until its closure in 1969, a tramway ran the length of Ryde Pier. For tens of thousands of holidaymakers, a ride on this tram was their first experience of the Isle of Wight. In 1969 one of the tramcars, Car No.2, was acquired for preservation. Our Ryde Pier Tram Restoration Project is bringing back to life this iconic symbol of the Island's once proud and extensive transport system.

Encouraging progress on the tram itself in April 2017. This shows trial fitting of axlebox and axles, engine, transmission and drop gearbox. Original parts reused include axleboxes, hornguides, spring hangers, engine subframe, brake column, various parts of the brake rigging and the front coupling. Photo: Alan Keef Ltd

The trams on the pier

On 29 August 1864 The Ryde Pier Company opened a standard gauge horse-worked tramway along the length of the half mile pier. The Pier Company subsequently experimented with steam tram engines and steam tram cars, and, in 1886, they became pioneers in the use of electric traction. In 1927 the Siemens electric power system was abandoned in favour of petrol-engined rail-cars.

Built by the Drewry Car Co for the Southern Railway, these tramcars were shipped to the Island before being driven to Ryde Esplanade on the mainline railway where they were jacked over the platforms in a special traversing cradle on to the tramway pier. They were somewhat quirky vehicles. As the journey only lasted a few minutes, capacity was always considered more important than comfort. They had wooden slatted seats along each side with hanging straps for standing passengers. Each tram set had a nominal capacity of around 90 including those standing but this was regularly exceeded. The driving arrangements would certainly have raised a few eyebrows among today's health and safety fraternity as the trams could only be driven from one end and were reversed up the pier with the aid of a unique countdown marker device in the cab approaching the Pier Head but otherwise nothing more sophisticated than a rear-view mirror! The petrol engines were replaced by diesel in 1958/9 and in 1968 an inspection of the tramway pier and rolling stock resulted in the system being condemned, with closure following on 26 January 1969.

Preservation

At this point, Car No.2 was purchased by the Island Vintage Transport Group. It remained on the pier for some months until transported by road to Newport Station, where the Wight Locomotive Society – the founding organisation of the Isle of Wight Steam Railway – was then based. In preparation for transportation the bodywork was removed in sections and covered storage found. Later it needed to be removed but was then sadly left in the open to decay. Parts such as doors, windows and fittings were removed and the remainder scrapped. This left the chassis, engine and running gear complete.

How the tram will look when complete. An original 1927 black-and-white image photoshopped by John Faulkner to show the proposed livery.

However, there were always those who were determined that it would be restored, and in 2011 a small group, including some of those responsible for its original preservation, set out a plan for its reconstruction. This was accepted by the Railway's Board the following year and an appeal was launched.

Reconstruction

For reasons mentioned above it was clear that, given current regulations, an exact historical restoration would mean that it would no longer be able to carry the general public. It was therefore decided to incorporate modifications necessary to allow the Tram to run at line speed on the railway and to carry fare-paying passengers. These include a more powerful engine, a driving position in the trailer car and a slight increase in floor height to meet current platform levels. At the same time, every effort would be made to keep the appearance as close to the original as possible.

A difficult decision was taken to restore it away from the Railway and a contractor was appointed in the north-east to complete the entire job. All appeared to be going well but just before the contract was placed the firm went into receivership. No other single contractor could be found so it was decided to put the work out to different companies. This caused considerable delays, but the first contract, for a new chassis for both Car No.2 and the replica trailer, was finally placed in mid-2016. This was designed by Graham Morris Engineering and constructed by AJ Lowther & Sons Ltd. Further good news was received when Perkins Engines kindly donated a new 404D diesel engine for the project.

A further contract has since been placed with Alan Keef of Ross-on-Wye who are currently assembling the running chassis for Car No 2. After four years hard work, there is finally some visible progress. Exact details as to how the body is to be reconstructed have yet to be finalised and once this has been done a suitable builder will be appointed. Unfortunately, costs have risen considerably since the launch of the project so a decision has been taken to complete the rebuilding of Car No 2, possibly temporarily fitting it out to operate as a single railcar, before commencing work on the reproduction trailer car which, unlike the original, will incorporate a driving console and disabled access.

How will the tram be used?

No final decisions will be taken until the Railway has had an opportunity to test it on its return but several suggestions have been made. These include demonstration runs on the longest siding at Havenstreet, using it for early or late services on the full line or using it as a second service when there aren't enough passengers to justify two steam trains, much as other Heritage Railways use DMU's. In any event, after all the delays, it won't be long before our visitors will be able to sample this unique mode of transport as, so far as we are aware, the Ryde Pier Tram is the only surviving self-propelled light railcar of the inter-war years.

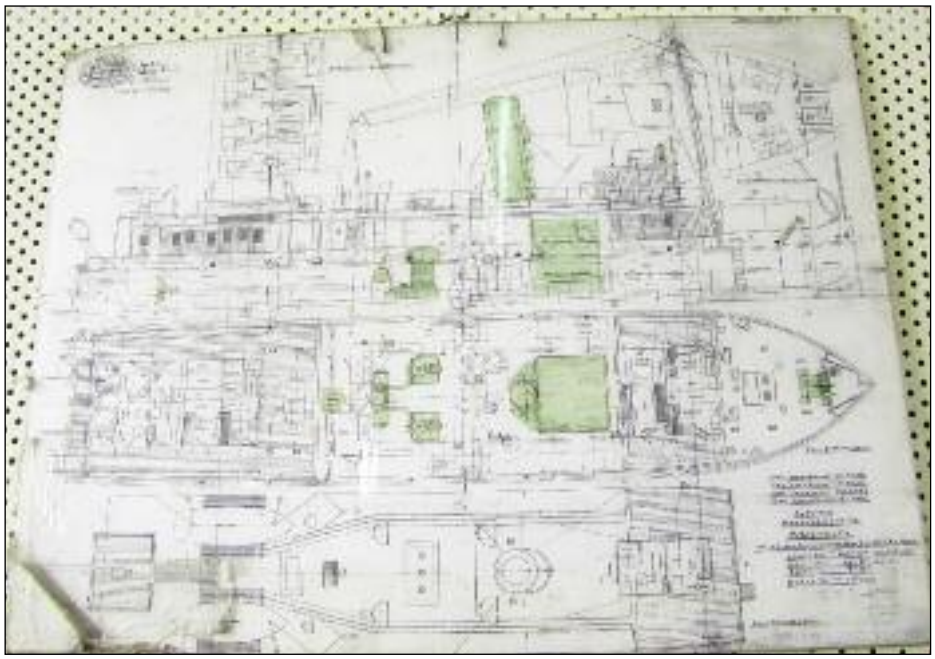
How is the project being funded?

The early stage of the project was funded by an appeal and was well subscribed. With a generous grant of £15,000 from the Association of Industrial Archaeology, a welcome bequest and some regular donations from Isle of Wight Steam Railway members the work has progressed much further than the original appeal would have permitted. However, more funding will be needed to finish the project so all donations will be most welcome.

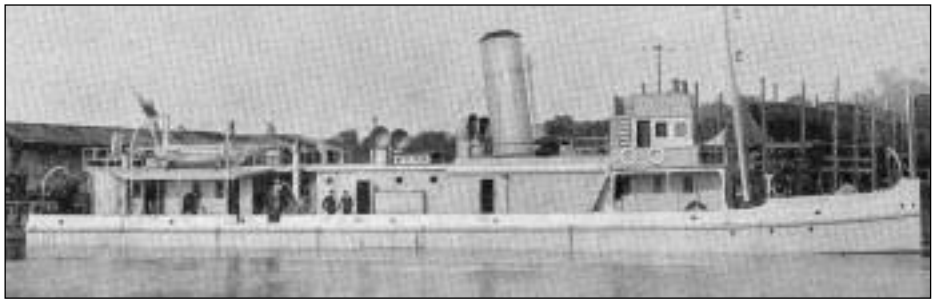
Still steaming up the river

Cruising the 600 miles of the Nile from Aswan to Cairo takes about ten days downstream and twelve upstream allowing for stops to visit the numerous tombs and temples. Until the security problems of recent years there were about 300 boats sailing the whole or part of the river. Just a handful are working at present, but among them is a remarkable survivor. Although rebuilt and enlarged, she still has the same engines; a pair of compound engines by Donkin and Co of Newcastle on Tyne. The boilers have been replaced.

Chris Barney



Layout drawing of ET6 as originally built



HMS Pirouette – sister ship of ET6

SS Misr was originally built for the Royal Navy in 1918 by the Lytham Shipbuilding and Engineering Co Ltd in Preston with the building number – ET 6 – as a 'tunnel tug' in operate in shallow water. At this time she was 130 feet long, with a beam of 26 feet and drawing 7 ft. A number of these were built by various companies to operate on the Tigris and Euphrates but before completion it was apparent that they would not be needed there and fourteen were completed as 'Dance Class' minesweepers and used to clear the minefields off the Flanders coast and off northern Russia after hostilities ended. The Preston company built four of these ET 10, 11, 98 and 99 and these were named HMS Sword Dance, Fandango, Step Dance and Morris Dance respectively. ET 6 and ET 7 (their Royal Navy names are uncertain) had already been completed; ET 6 was launched on 28 May 1918, completed on 6 July and immediately sent to the Mediterranean, arriving in Alexandria in September having steamed 3276 miles in 18 days. She operated in Port Said as a tug and also participated in settling the 1924 uprising in Sudan, as a warship and troop transporter for the British Egyptian joint task force. She was then sold to the Egyptian authorities and employed on the Upper Nile.

In 1938 she was converted into a luxury yacht for the Egypt's last monarch, King Farouk. At this time she was considerably enlarged both in length and breadth but her engines were retained. After Egypt's monarchy was overthrown in 1952, *SS Misr* became state property and was allocated to the Egyptian Ministry of Irrigation and she languished in a shipyard in a Cairo suburb until purchased in 2003 by Traveline, an Egyptian tourist company who totally rebuilt her while still retaining her original engines.

These engines are compound, open framed and operate at 120 psi with 11 inch high pressure and 24 inch low pressure cylinders and a 15 inch stroke each producing 225hp. She originally carried 40 tons of fuel but some of the tanks have been removed to give space for three large Caterpillar generating units and other equipment appropriate to a modern cruise ship.

For cruises on the Nile on SS Misr contact Noble Caledonia

Compound engines by Donkin and Co of Newcastle upon Tyne

SS Misr today

Jurassic steams in the park

Jurassic, the elegant and historic steam locomotive has been successfully steamed for the first time in 31 years, thanks to work financed by the Heritage Lottery Fund and carried out by volunteers at the Lincolnshire Coast Light Railway and their contractors.

Jurassic on test run

Jurassic was built in 1903 in Bristol by Peckett and Sons Ltd for the 24 inch gauge railways used in the quarries and cement works of Kaye and Company in Southam, Warwickshire, together with similar locomotives named after prehistoric geological periods.

The Lincolnshire Coast Light Railway bought her in 1961 to help operate their services linking the bus terminus at Humberston, near Cleethorpes, with the local beach and holiday camp. When that location closed in 1985, she was moved into store and then to the LCLR's new location in the Skegness Water Leisure Park, north of Skegness. The line reopened to passengers in 2009, since when the historical significance of its unique collection of rails, locomotives, carriages and wagons from the trench railways of World War One and industry and farms in rural England has become more widely recognised.

In 2016, the Heritage Lottery Fund awarded *Jurassic's* owners, a charitable trust, £43,000 for restoration and for interpretation of her significance to Britain's economic and transport history.

The first task was to dismantle *Jurassic,* with the boiler and firebox being sent to the North Norfolk Railway for repair and rebuilding at their workshops near Sheringham.

These items have now been reunited with *Jurassic's* frames at Skegness, together with the smokebox; her long elegant chimney has been put back in place; the injectors have been repaired and refitted, as has the connecting pipework for steam and water. The gauge glasses, the regulator, the reversing lever and associated fittings, have all been refitted and after repair, tested.

The large cab (which can accommodate four adults, including the driver and fireman) has been sand blasted to remove 114 years of accumulated soot, grease and grime; the hand and air brakes have now to be refitted as well as the saddletank which has been repaired, together with insulation, boiler cladding, the whistle and new components such as a brass dome cover and other fittings to replace those stolen several years ago.

The Railway hopes to have *Jurassic* operating afternoon services before the end of this season but that will depend on progress. Until she is ready, services will be operated by the LCLR's fleet of vintage Motor Rail 'Simplex' diesels, which date back to the 1920s and 1940s, when they pulled trainloads of potatoes and agricultural produce as well as clay for brickyards in Lincolnshire.

Railway spokesman John Chappell said: "*Jurassic's* successful steam testing is a momentous achievement for the Railway and its dedicated volunteers. A huge cheer went up when the first clouds of steam and smoke erupted from her chimney and she moved effortlessly from the workshops to the Walls Lane station to begin her first trial run to the terminus at South Loop.

"It was a moment of pure joy for everyone and we're now looking forward to her running regularly – so yes, we can really say, *Jurassic* is steaming in the Park!"

The Lincolnshire Coast Light Railway Historic Vehicles Trust owns and operates a number of historically significant narrow gauge railway vehicles, which it has restored and now displays at its base on the Lincolnshire Coast Light Railway, in the Skegness Water Leisure Park, in Walls Lane, Ingoldmells, Skegness PE25 1JF. The collection, which has earned awards for the quality of its restoration, includes an ambulance van, bogie and 4-wheeled wagons used in the trenches of the World War I battlefields and later, on agricultural railways in the Lincolnshire Fens and at the seaside – as well as locomotives from industry, such as Jurassic. The collection includes a 'disabled-access adapted' bogie wagon from the trenches which gives passengers an idea of what it was like to travel to the front line.

Hetty opening

St David's Day 2017 saw a momentous step forward in the preservation of the Hetty winding engine, featured in IA News 180. After many years of negotiations its owners, Rhondda Cynon Taf Council, formally handed possession of the building and engine to the Great Western Colliery Preservation Trust. In the presence of representatives of many historical and mining groups from across South Wales and the South West, and of national bodies, Cllr Maureen Webber, Deputy Leader of RCT, signed a thirty year lease to the Trust. The assembled throng, who filled the engine house and spilled outside, were welcomed by Brian Davies who told the story of the colliery and engine. Local broadcaster Roy Noble and Welsh Assembly Member Mick Antoniw contributed. After Mrs Webber had signed the lease Gemma Downes, the grand-daughter of the last engine-driver George Downes, broke a bottle of wine against the winding drum, emulating Hetty Snow who first started the engine in 1876. Gemma then ascended the steps to the driving platform and started the engine.

At present the engine runs on compressed air, but having a boiler is an ambition. Now the Trust has formal possession and security of tenure they are in a position to raise funds and carry out much needed work to the buildings and, in particular, the headframe. The engine itself is in good condition having been restored by volunteers over the past sixteen years. It is a tribute to the loving care that George Downes had bestowed on his engine that, after twenty year's idleness, it started first time for the volunteers.

The house and its headgear are a prominent and iconic landmark close to the entry to the Rhondda Valley. It is good that the Council has recognised its worth and taken positive steps to ensure the Scheduled Ancient Monument is now in safe hands.

Michael Messenger

AIA Council Meeting 17 June, 2017 – a summary of the minutes

The meeting took place at the now customary venue of the Theatre's Trust in Charing Cross Road.

Liz Colquhoun of Taylor and Francis, publishers of the IA Review, presented this year's Publishing Report which shows continued growth in downloads and citations of articles appearing in our journal. Liz also presented a draft of a new publishing agreement between ourselves and Routledge which, if our discussions prove fruitful, will come into operation from January, 2018. The new contract will enhance the journal and result in significant cost savings to the Association, but, perhaps more importantly, Routledge will be conducting a series of marketing campaigns in order to boost circulation, and to grow and protect our membership base.

Tony Crosby reported on the HLF IMTG 8 June meeting. The more interesting points were:

Alison James of Historic England gave a presentation of VR (Virtual Reality), in this case relating to dives on wrecks, but this technique might also be applicable to inaccessible industrial heritage sites, unstable buildings and mines, etc.

The National Association of Transport Museums expressed concerns over business rates, increasing water charges, air quality rules, cuts to Local Authority museums' funding, and the Vnuk guidelines. *(Consumers in the UK could soon be forced to insure every motor vehicle they own, regardless of whether it is used on a public road or not, following a recent ruling by the European Court of Justice).*

Stephenson's 'Invicta' faces an uncertain future as Canterbury wishes to redevelop site of the museum.

The Chairman, Keith Falconer, had the following to report:

> Shane Kelleher has been confirmed as IHSO (Industrial Heritage Support Officer) until the end of the current project in March 2020.
>
> APPG IH (All Party Parliamentary Group for Industrial Heritage) the previous Chairman, Nick Thomas-Symonds (Lab. Torfaen) has been re-elected. All AIA members should consider lobbying their MPs to participate if they think it appropriate.
>
> Lancashire Mill Museums – various national bodies have declined as yet to take over the ownership or management of either Higher Mill Helmshore, or Queen Street Mill. In the meantime, the AIA is nominating Queen Street Mill as an Europa Nostra Most Endangered Site 2018. See page 2.

The Treasurer, John Jones, placed before the meeting the 2016 Report of the Trustees, the report was approved and signed off by the Chairman.

The accounts for the Restoration Grants scheme was noted and it was highlighted that since its inception, and thanks to our anonymous donors, over £500K has been given to restoration projects.

Membership, Bruce Hedge reported that membership currently stood at 494, exceeding the 2016 year-end number, but still someway short of the 537 year-end 2015 figure. Bruce will write to the non-members who attended last April's Practical Day and to those who participated in the Spring Randstad tour, encouraging them to become members.

The Secretary, David de Haan reported that Ian Miller, Shane Kelleher and Tegwen Roberts have all agreed to serve on Council for a second term.

AIA Future Direction, a briefing document produced by Steve Dewhirst, Shane Kelleher and Ian West was accepted by Council. This topic will be taken up at the October Council meeting.

Conference Reports, John McGuinness reported that bookings for the Moulton-based 2017 conference had picked up significantly in the past weeks. It was agreed that bookings for Seminar only, and for no other part of the conference, would not be subject to the late booking charge. It was also agreed that there would be a free drinks reception prior to the conference dinner.

The 2018 conference is to be based in Caithness, from 22 to 28 June, organised by Mark Watson, who many will remember ran the successful 2013 Dundee conference.

The Somerset conference, 9 to 14 August 2019, will be centred on the Bridgewater and Taunton College, and an updated gazetteer will be produced.

The AIA Practical Day held in Ironbridge in April was a great success and it was agreed to explore the holding of a further practical day around the theme of mining landscapes in the Derbyshire Dales in 2018.

Our **Affiliated Societies Officer,** Lynne Walker has had to resign and Council thanked her for all her efforts in the past. Until a replacement is found, the Secretary will handle enquiries.

Amber Patrick's Report on 'Endangered Sites' was noted. In summary, there were potentially 27 industrial sites reported on the CBA data base for the period 10 February to 26 May. A full list of sites commented upon is regularly reported to Council. Attention was drawn to two appeals, Chance Glass Works and Waltham Abbey Royal Gunpowder Mills and a call-in for Beehive Mills, Bolton. The AIA commented on the proposed demolition of Newsome Mills, Huddersfield; it was noted that the application has since been withdrawn. Another application of note was the Ironworks of Fussells in Mendip, Somerset; the proposed works there should ensure that this important site survives. Mill fires have dominated the news in recent months and members' attention is drawn to the article in the summer edition of IA News. A comprehensive report on a number of textile mills under threat is on page 19 of this edition. It was agreed that Amber's role title needed to change to reflect her actual work for the Association, henceforth it will be 'Planning Casework Officer'.

Field Visits. Following on from the well-received Randstad tour in the Spring of this year, a Spring Tour of Saxony was proposed by Bill Barksfield for the 14 to 19 May, 2018. Full details will be forthcoming in the *IA News* and on the AIA Web-site. Three Country House Comfort & Convenience tours remain in the calendar for 2017, all led by Marilyn Palmer – again see the web-site.

As web-master, Bill Barksfield gave the statistics regarding what people look at on our web-site, the site normally receives between 80 to 100 hits per day, the exception being 8 April when it got 851 hits, probably down to the posting of the news regarding the closure of the two Lancashire Mills.

E-Faith – Kate Dickson. The AIA has agreed to hold a one-day seminar in October 2018 on the general theme of 'Changing Perspectives in the Adaptive Re-use of Industrial Buildings', this is to mark the industrial element in the 2018 European Year of Cultural Heritage. The seminar, at a venue yet to be decided, would be a substitute for the seminar that usually precedes the Annual Conference and would also double as our Award giving event as the Caithness Conference programme will not cover these. Mike Nevell has offered a room in Salford as a possibility but we are open to further suggestions focussed on Yorkshire/Midlands.

Bruce Hedge

The AIA Website

In the first quarter of the year, the site received an average of about 550 hits per week. This is now fairly steady. Other than the home page the five top hits were:

Characteristics and Forms of Road Transport	499
Events Diary	335
Industrial archaeology Review	316
Restoration Grants	311
Membership	262

'Characteristics and Forms of Road Transport' is a 'Feature' article, just a couple of paragraphs about a weekend event in 2007, of which I am otherwise ignorant, copied from the old website. I do not know why it is our most popular page. Is there some phrase here which is frequently Googled by GCSE or A-level students perhaps? They don't get much from the page. It mentions a few things that speakers included in their talks and that's all. Does anybody have any further records of this event, paper or electronic, which I could include on the page to help those in search of enlightenment?

Bill Barksfield Web master

Textile mills under threat and referred as planning applications

In recent months there have been a number mill fires and some of these subsequently become part of planning applications to demolish the buildings. One such application was in respect of Newsome Mills, Hart Street/Ruth Street, Newsome, Huddersfield which was submitted in February of this year.

Newsome Mills Huddersfield, after the fire

This application was for the demolition of the four storey mill building, and the weaving shed both of which had been severely damaged by fire. It was noted that no mention has been made of the clock tower and therefore the Association expected that it would be retained and in any case they would strongly object to its demolition. The proposal also included the retention of the gates and archway entrance to the site as well as the lodge and office façades. The Association further noted that until the fire on 17 November 2016 it was an imposing four storey building. The fire had resulted in the demolition, on safety grounds, of all but the ground floor and up to the window cill level of the first floor of the mill. The single storey weaving shed was also largely destroyed. The proposal was to demolish the remains of the walls of the mill and weaving shed on safety grounds, following a structural survey. The Association considered that every effort should be made to retain the surviving walls of the mill building and weaving shed as this would give definition to the site and provide a greater link with the site's former use, but suggested that if it was not possible to keep the walls to their then present height their foot print should be retained. As ever, the Association recommended an appropriate recording condition and that if demolition were approved there should be some interpretation of the site, perhaps in the form of information boards. Fortunately, this application has been withdrawn but in all probability there will be another.

Newsome Mill, however, was not the only mill upon which the Association has commented in recent months. A long running saga has been the proposed demolition of the 25 bay weaving sheds at Hollins Mill, Rochdale Road, Todmorden. The mill is a robust stone building which provides emphasis to the road elevations to Rochdale Road and Hollins Road. It has interesting façades and of particular note are the ashlar surrounds to the windows which although typical of the Calder valley are relatively rare on mills which more usually have plain windows. The importance of the weaving shed is that it forms part of a complex which included both spinning and weaving. Unlike the three previous applications upon which the Association commented (objected) which were for complete demolition, the new application was for partial demolition. The most noticeable effect of this demolition would be on Rochdale Road, including the roof structure. The application indicated that the wall to Rochdale Road would be demolished to a low level (three courses). That would have meant the loss of the windows and their ashlar surrounds as well as the original roof structure. It was proposed to construct a new elevation behind to reflect the original and using as far as possible reclaimed materials. In consequence the total roof size would be reduced. Previous objections had been made because it was proposed to demolish all of the weaving sheds. Although this was not the case with the new application, there was insufficient detail to determine what the eventual building would look like. It was accepted that a new use had to be found for the building to ensure the retention and maintenance of this integrated mill which apart from being a landmark is socially important for the area. The Association recommended refusal until full details of the new build were provided, and in so doing was following the Victorian Society's lead.

Another mill upon which the Association commented – an objection to its complete demolition – was Nos 1 and 2 Beehive Mills, Crescent Road, Bolton. The Association's first response was limited by the character count on the local authority's website but the application was 'called in' and the Association was able to give a more detailed response. It noted that in 1982 Beehive Mills had been described as an 'outstanding example of late brick-built cotton mills' in Owen Ashmore's *The Industrial archaeology of North-west England,* published by Manchester University Press. This gave a brief description of the exterior of the mills at that time. since then, unfortunately, some features had been lost, including the pyramidal roofs. Despite these losses, the mills remained impressive and important buildings within the townscape. They demonstrate the importance of the textile spinning industry in Bolton. The Beehive Spinning Company was the only textile company founded in a depressed year and therefore was atypical, and the double mill is now relatively rare, exceeded in Bolton only by the trio at Swan Lane Mills. It is understood that the designer was the reputable architects' firm of Woodhouse & Potts. Finally the Association pointed out that Beehive Mills are valuable and interesting buildings and reflect the importance of Bolton as the second most important cotton spinning town in the world. They are part of the community's history. The appeal decision is still awaited.

Finally, mention should be made of the Association's response – objection – to the complete demolition of Croft End Mill, Bolton Road North, Stubbins, Rossendale, Lancashire and its replacement with housing. The mill buildings which included bleach works and a reservoir were constructed primarily of stone but with sections of brick. The main elevations on to the road were relatively plain and it appeared that little of the mill buildings which were constructed in the first quarter of the nineteenth century survived as a result of additions and rebuilding during the later nineteenth century and into the first half of the twentieth century. As a result of subsequent re-uses few original features survived in any of the sections of the buildings. However, it was noted that there were remains of sluice, a drive shaft plate, as well as a variety of cast iron columns throughout the buildings. The buildings were not listed but were considered to have some local historical significance. A recording condition and watching brief were recommended if the application to demolish was approved together with the provision of an information board so that future generations would know the original use of this area of Stubbins and the industrial heritage of the whole valley. The application was approved and building recording was undertaken and formed part of a new application to discharge the conditions. The Association was asked to comment on whether the location of the information board and sluice was adequate, also part of the conditions. The proposed location was noted as not being ideal and the local authority were informed of this.

My thanks to those members (Mark Watson and Roger Holden) who have provided information on the various mills.

Amber Patrick,
Planning Casework Officer – formerly
Endangered Sites Officer

A warm welcome to our new members:

Guy Bettley-Cooke of Newmarket
Darran Cowd of Ramsgate
Lynn Holland of Whitworth, Lancs
Hayley Underwood of Middleport Pottery, Stoke-on-Trent
Peter Burnett of Yeovil
John Boucher of Westwood, Nottingham
Stephen Broadhead of Macclesfield
Nansi Cole of Sherburn-in-Elmet, Leeds
Martin Conlon of Glasgow
Peter Hall of Burnley
John Jasper of Wellington, Somerset
Charles Lockyer of Malvern
David Wood of Swansea
Andrea Goodison of Buxton
David Rollinson of Bridgewater, Nova Scotia

Industrial Heritage Support Officer Report

The *IA News* is delighted to congratulate Shane Kelleher on being confirmed as Industrial Heritage Support Officer (IHSO) until the end of the present funding in March 2020.

The Industrial Heritage Support Officer project commenced in September 2012. The post is funded by Historic England (HE) through their National Capacity Building Programme, and is managed by the Ironbridge Gorge Museum Trust (IGMT) in partnership with the Association of Independent Museums (AIM) and the Association for Industrial Archaeology. The project is supported by a Steering Group. In addition to the IGMT, AIM and AIA, this also consists of Sir Neil Cossons, and representatives of the Prince's Regeneration Trust (PRT), the Heritage Lottery Fund (HLF), the European Route of Industrial Heritage (ERIH), and a Project Assurance Officer from Historic England.

The IHSO project stems from a growing concern, underpinned by the findings of Sir Neil Cossons' *Sustaining England's Industrial Heritage: A Future for Preserved Industrial Sites in England,* 2008 report for English Heritage, that publicly accessible industrial heritage sites face an increasingly uncertain future. Many sites are trust owned or operated and are wholly or partly run by volunteers. Common problems include issues of volunteer retention and recruitment, technical skills transfer from an ageing volunteer base, adapting to a radically changing funding and visitor environment, and achieving modern 'best practice' conservation, management and visitor presentation standards. The particular nature of industrial heritage attractions, typically combining extensive sites, big and complex historic buildings and additional features such as working machinery, make these challenges especially pressing.

The IHSO project aims to deliver England-wide support to improve the capacity, sustainability and conservation standards of preserved industrial sites with public access. The key objectives of the IHSO project are to:

- Develop a national strategy to improve the sustainability and conservation standards of preserved industrial sites with public access;
- Improve the capacity amongst owners and managers to secure the long-term future of these sites;
- Create a network of relevant stakeholders and grant providers that is sustainable beyond the life of the project.

In the three months to June 2017 the IHSO has provided direct advice or support to 18 organisations as far apart as Northumberland and Somerset, has provided training to over 180 individuals, has been involved with developing Industrial Heritage Networks in the North West, the West Midlands and a nascent network in Greater London besides reporting and advising on numerous other activities.

In June the IHSO attended a study trip to Industriada (Polish industrial heritage festival) 09 and 10/6/17 in Katowice. He was invited by Adam Hajduga (ERIH Vice President and Head of unit for promotion of industrial heritage Department of Culture Marshal Office of Silesia Voivodeship) following the IHSO presentation at the ERIH UK meeting in April. The IHSO was part of a study group of 20 consisting of delegates from Poland, the Czech Republic, and Germany, which visited a number of sites and events including the Nikiszowiec Workers Housing Complex, Zabrze Coal Mine, EC Szombierki Power Station in Bytom, Silesian Porcelain Factory, the Museum of Zinc Metallurgy, and Tarnowskie Góry silver mine. A full report on the trip will be included in the next edition of *IA News.*

Over the five years of its existence the IHSO project has been so successful that at the meeting the steering group in March it was decided that a HLF Major Grants Programme bid would be submitted later this year for an expansion of the project.

Coalbrookdale Foundry to close

On 24 May it was announced that the Aga foundry in Coalbrookdale will close in November. Members attending the 2016 AIA Conference at Telford will remember their visit to the foundry as one of the highlights of the week.

The largely automated plant produces all the main parts for Aga and Rayburn cookers as well as for Irish Stanley cookers which are assembled in Waterford. It is proposed that the Aga castings for cookers will be outsourced, but the building, assembly, sales, spares and after sales activity will continue to operate from the Aga Telford site.

At the time of our visit it was evident that large economies had been made in the foundry operation but unfortunately this does not appear to have been sufficient to save the plant.

The Swedish origin Aga cookers have been made at Coalbrookdale since the 1930s when Aga Heat was acquired by Allied Ironfounders. The plant became part of the Glynwed Foundries Group in 1969 and was then absorbed into the St Gobain Group. In 2015 AGA Rangemaster was acquired by the Middleby Group, based in Illinois, for £129m. The Middleby Corporation manufactures all kinds of commercial and domestic food preparation and cooking equipment with a quarterly turnover of £400m.

The foundry is on the site of Abraham Darby's 'New Furnace' and there are suggestions that there may be opportunities for archaeological investigation.

VISIT THE AIA WEBSITE

www.industrial-archaeology.org

Larger and Working Objects Guidelines

Invitation for Contributions

The Association of British Transport and Engineering Museums (ABTEM) has recently appointed the International Railway Heritage Consultancy (IRHC) to work with them to produce new guidelines for museums and private collectors with larger and working objects. The guidelines will cover stationary engines, industrial machinery, road vehicles, aircraft, railway vehicles, ships, boats and other working items.

Standards first published by the former Museums and Galleries Commission (MGC) have been used widely by specialists and non-specialists alike since they were first published in 1994, but after two decades of experience now need updating.

The project is supported by a grant from the Arts Council England through their Museum Resilience funding stream which enables museums to become more sustainable.

We are looking for contributors to support this project by either:

1. Expressing interest to join the External Control Group that will pilot the Guidelines within the museum and heritage sector. External Control Group members can be equally museum professionals or private individuals with one or more examples of large or working objects in their care;
2. Providing case studies that illustrate the decision making process in the care of a large or a working object according to best practice as outlined in the 1994 and 1997 MGC Standards and Guidelines. Selected case studies will be included in the new edition of the guidelines, expected at the end of 2017;
3. Submitting relevant documentation such as Collections Care & Conservation Policies, Object Conservation Manage-ment Plans, or Maintenance logs, Working Objects Policies etc. In other words, any documentation that will help us understand the preservation philosophy and decision making ethos of each contributor along with the extent of any influence the original Standards and Guidelines may have had in the adoption of commonly used practices;

The guidelines will be widely publicised and promoted, including a programme of seminars scheduled between October 2017 and March 2018.

For further information please contact Efstathios Tsolis, Associate Consultant, email tsolis@efstathios.co.uk, tel. +44 (0) 7726419551

The main publications of Standards and Guidelines can be found online:

MGC 4 Standards in the museum care of larger and working objects;

Larger & Working Objects – a guide to standards in their preservation and care.

June 2018 Conference in Caithness

The planning for the 2018 conference in Caithness is proceeding. I met with Mark Watson and his local organiser Jenny Bruce in the first week in May, when I spent two days in the Wick area visiting the proposed venues for the conference, as well as some of the major sites to be visited.

What really struck me is the large range of industrial heritage in Wick and elsewhere in the Caithness area. Wick was a major centre for the herring fleets and at its peak was the largest herring port in Europe. This industry was supported by the fish market and makers of ropes, nets, baskets and barrels. There was also kipper smoking. All these industries are represented by surviving buildings and by artefacts in the significant Wick Heritage Centre together with the Wick Society's famous Johnston photographic archive.

Centred on Argyle Square, much of Wick was laid out to a pattern proposed by Telford in the late 1700s. Water for the town was provided by the Mill Lade, which brought water from Loch Hempriggs some five km down to the settlement of Pulteneytown including the 'Old Pulteney' distillery, which now uses this water source for production of whisky.

Works by Thomas Telford include two major roads with associated bridges. These are the routes of the A99 following the east coast and the A9 to Thurso. In addition Telford designed some of the small coastal harbours and two churches and associated manses.

The flagstone industry's products, mainly paving and monumental work, were exported worldwide, including South America, Australia and New Zealand. The works at Castletown are now incorporated into a heritage centre while Caithness Stone Industries has extensive works at Spittal where large slabs of slate are split, sawn and polished for a wide range of uses as well as paving.

Local history includes the Kildonan Gold rush of 1868, agricultural improvements and the introduction of Cheviot sheep in 1792. Two notable people of the area were Alexander Bain who developed the first electric clock and the first fax machine, and James Bremner, the harbour builder and wreck raiser, who recovered Brunel's iron ship, the Great Britain, after it ran aground.

The nuclear power installation at Dounreay has led to the need for several high quality engineering services, one of which is provided by JGC Engineering at Janetstown near Thurso, another being the unique sea cable laying company Subsea 7, with its eight km railway.

The current plan is for the conference to include the option of a start in Inverness on the morning of Friday 22 June. Delegates would then travel by coach to Wick, stopping on the way to see items of interest, including the oil platforms moored in the Cromarty Firth. Alternatively they could go straight to Wick by other means. The Saturday programme would include the AGM, the Rolt lecture, local visits and the conference dinner. Sunday and Monday would feature tours in Caithness with talks on local topics in the evenings. On Tuesday we plan a full day trip to Orkney where we will see sites connected with the Navy, the scuttling of the German fleet, its raising for scrap, and the Churchill barrier – a major war-time engineering achievement. A possible alternative tour might visit the popular tourist sites of Skara Brae, the Ring of Brodgar, Kirkwall and its cathedral and the Italian Chapel. Wednesday will offer a return to Inverness with further visits on the way, or an opportunity to stay longer in the Highlands and Islands. It is possible that a sleeper connection from Thurso to London will start in 2018.

I will report with further details as they develop and at the conference at Moulton College.

John McGuinness

Woolwich Stoneware Kiln

In 1974 a group of archaeologists excavated several pottery kilns near the Riverside in Woolwich. These dated from the seventeenth century and one of the kilns discovered proved to be a stoneware kiln of particular interest. It was thought likely that this might be the first kiln of its type in Britain. In 1978 a report of the 1974 excavation by Sylvia Pryor and Kevin Brockley was published in Post-Mediaeval Archaeology.

Robert Carr

Woolwich kiln in its mobile home *photo R Carr*

This report describes the results of the excavation of two adjacent kilns at Woolwich, one producing earthenware and one producing stoneware. The stoneware kiln had a single stoke hole and produced Bellarmine jugs with other stoneware vessels, and is the only stoneware kiln of this period yet discovered in Britain.

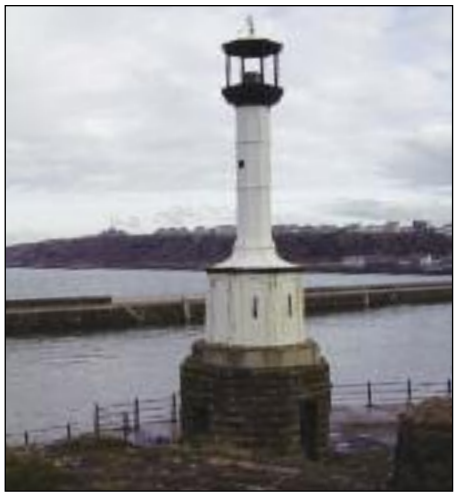
It was decided that as this kiln was rather special it should be retained. The site was required for redevelopment and so in 1975 a remarkable piece of engineering took place. The whole kiln was encased in a wooden box and truncated beneath.

The box containing the kiln, some twenty feet square, has resided at various places about the Woolwich Arsenal since 1975. However, the site where it was this year was needed and, moreover, after more than 40 years the box containing the kiln was rotten and the structure failing. This was a crisis situation.

The solution has been to call in Oxford Archaeology to carry out a very thorough investigation of the stoneware kiln using the latest digital techniques. Once this investigation was started the kiln itself was to be destroyed so on the 28 and 29 March appropriate visitors were invited to view the kiln before its destruction. On 30 March the kiln was sliced and sectioned with a detailed digital record being kept. On Friday 31 March the demolition men came in and by the end of the week everything was cleared away.

Woolwich stoneware kiln before final destruction
photo R Carr

Maryport Lighthouse



What is thought to be the earliest cast iron lighthouse in the world is situated on the south breakwater at Maryport; it dates from 1846. The 4.7m octagonal lighthouse was initially run by the General Lighthouse Authority and was taken over by Trinity House in 1961. They handed over the light to the harbour commission after a new light was built.

The lighthouse has been repainted and a rusty steel panel has been replaced with cast iron under a government renovation scheme to regenerate seaside towns.

The lighthouse features in a number of L S Lowry's paintings.

Graham Brooks

Beat that

I enjoyed Robert Carr's article on anvils as musical instruments. As usual, we can look to the US for carrying the idea to extremes. In 1872 the city of Boston celebrated peace following the end of the Franco-Prussian War with a World's Peace Jubilee and International Musical Festival.

'Magnitude – on a scale never before conceived – was the keynote of the Festival. The Coliseum in which the concert was given occupied more than four acres. The auditorium held 50,000 people and the stage was comparably huge, providing room for a 'Grand Orchestra' of 1,000 instrumentalists and a 'Grand Chorus' of 20,000 men and women.

'For the great public that had never before attended concerts' [the bandmaster Patrick Sarsfield Gilmore] 'devised special novelties, among them a performance of the Anvil Chorus from Il Trovatore. In this, the tremendous orchestra and chorus were augmented by a military band, a drum corps, an accompaniment of cannons and bells, and 100 anvils vigorously pounded by uniformed members of the Boston Fire Department.' (Lloyd Morris, sleeve note of LP record CLP 1040, 'Mr. Strauss comes to Boston', His Master's Voice, 1960s).

Derek Bayliss

Who is this?

I am researching this eighteenth century oil portrait of a gentleman standing in a landscape next to a rocky escarpment. In his hand he is holding a piece of ore, which looks gold in colour; with his other hand he is pointing to this piece of ore. On the relined canvas there is the word 'Tissington' written in modern ink, probably by the re-liner and taken from the original canvas. I was wondering if you knew of any academics with a good knowledge of the key players of mineralogy and geology in the eighteenth century, whom I could contact and who might be able to help me identify the sitter in the portrait. The portrait itself is 50 x 40 inches, very grand and imposing, so I would suggest that the sitter could be a significant personality in the field of mineralogy or geology.

Greg Page-Turner

Who knows of a Wilson Engine?

Wilson Engine at the Waterworks Museum, Hereford

The Waterworks Museum, Hereford has restored from scratch a large horizontal single-cylinder oil engine made by C F Wilson & Co Ltd on the east coast of Scotland in the 1920s. It was transferred to the Waterworks Museum by the Grampian Transport Museum of Alford near Aberdeen in 2012. It had been rescued from Dyce Airport where it had stood for many years without even a tarpaulin for protection. The engine has undergone considerable restoration work down to component level with many problems overcome. The engine is now working and will be unveiled to the public on the Museum Gala Day at the end of July. The Museum can find no other reference to another museum or a collector having a Wilson engine working or not working. They would be pleased to hear from, and share their restoration experiences with other Wilson engine owners.

Wilson engine data:
Stroke 17" (432mm) Bore 9" (230mm)
Flywheel diameter 74¾" (1900mm)

Noel Meeke
Chairman Emeritus, Waterworks Museum, Hereford

Where is this?

Stuart Burroughs, Director of the Museum of Bath at Work, asks if anyone can help with this curious picture sent to him by Graham Wilkinson? It may be the picture is imaginary or idealised but someone may have an idea of the location depicted in the engraving. It seems to show broad gauge lines and mineral wagons running through a stately home 1830-1850. The engraving was with others from the Bristol and Bath area.

Keep safe on line

The Charity Commission urges trustees to be vigilant about ransomware attacks. Over 200,000 organisations in 150 countries, including the National Health Service, have been affected by a recent ransomware attack. The vulnerabilities exploited by the hackers are the same for all, whether they are charities, individuals, public or private sector organisations.

The Charity Commission encourages all charities to **follow protection advice** recently issued by the City of London Police and National Cyber Security Centre.

The National Council for Voluntary Organisations has best practice guides on its Knowhow Non-profit site on:

How to protect your organisation's IT systems Practical steps you should take in using anti-virus software;

How to stay safe from email scammers Tips for individuals to implement in their everyday work;

How to use more secure IT systems Measures your organisation should carry out to protect itself, including establishing good practice policies.

Glasgow cable trams

I have recently returned from Glasgow and while there I took the opportunity to continue my walking tour of industrial archaeology along the River Clyde. Last year I discovered that the buildings which had housed the two steam winding engines for the cable haulage system of the Glasgow Subway still exist in Scotland Street. Cable haulage was abandoned in 1935 when the system was electrified. In 1940 the buildings were acquired by James Howden Marine Engineering who already had their works on both sides of the engine house.

During the war the building was used to assemble Sunderland Flying Boats. It then became the pattern shop and stores. Howdens vacated the premises in 1988, the last major project in the works being the completion of two TBMs for the landward bores of the Channel Tunnel. Much of Howdens works were demolished in the 1990s but the office block, long erecting shop, the former subway winding engine house boiler house and rope-race tensioning carriage building still stand, but in a semi-derelict state. While walking past I noticed a normally boarded up gate was open and a couple of workmen were clearing up rubbish. I enquired whether I could take a look around; they were helpful but said it wasn't possible at that time. I would need to come back when the boss was there. They did tell me that some of the buildings are listed and a refurbishment program will start shortly to convert them for other use. One of the buildings still has rails set in the floor (I imagine this is the former cable tensioning building) and another has steel stanchions with plummer blocks in place.

Howden Works Scotland street, Glasgow. The bay on the left with the sign "elopm nts" is the tension run that kept the underground cables taut.

Next door is the former Scotland Street School, designed by the Charles Rennie Mackintosh, built 1906 and now turned into a museum of education. Inside is a series of photographs showing the history of the local area, with some information about Howden's works and the former subway cable haulage system and powerhouse.

From this and the internet I have been able to piece together the following:-

- There were two steam engines of unknown make each with single cylinder 3ft 6ins x 6ft stroke; Corliss valves with trip gear on inlet valves, exhausting to the atmosphere, the flywheel was 25ft in diameter and weighed 50 tons. It operated at 55 rpm. Drive from the engines to the haulage cable winding gear was by multiple ropes. A clutch was incorporated in the drive which enabled the engine to be disconnected or in an emergency connected to the opposite cable or visa versa.
- The two endless cables one for the inner and the other for the outer circle were each nearly seven miles long 1.5 inches diameter and weighed 57 tons. The normal speed was 12.5mph.

Alan Denney

York Museums wins business rates case

York Museums Trust's business rates have been reduced following a court ruling which could have a significant impact on the way English and Welsh museums are valued in the future. The Trust is part of the Association of Independent Museums.

The Upper Tribunal (Lands Chamber) has ruled on appeals in favour of the Trust which argued that rates should be set based on net income, not the cost of rebuilding, which the Valuation Office Agency has traditionally used for many museums.

The decision has seen the Trust's rateable value reduced by £120,000 against the original listing, with a large proportion of this coming from the Yorkshire Museum and Gardens' revaluation because of the level of expenditure needed to maintain and run the site.

A useful new website

The Association of Independent Museums (AIM) has just launched its new website with free resources and publications, a section for heritage trustees and event listings. The website includes AIM's own online content combined with new sections such as case studies from UK museums and heritage sector news. It can be found at www.aim-museums.co.uk

Heritage Manifesto 2017

The Heritage Alliance has published its Heritage Manifesto 2017 setting out five simple tasks for the new Government.

- Maximise the advantages, and minimise the disadvantages, of Brexit for heritage;
- Maintain and improve the protection for heritage;
- Attract more investment and engagement in heritage, and build sector skills and capacity;
- Effect positive fiscal change for heritage;
- Continue to back Lottery funding for heritage.

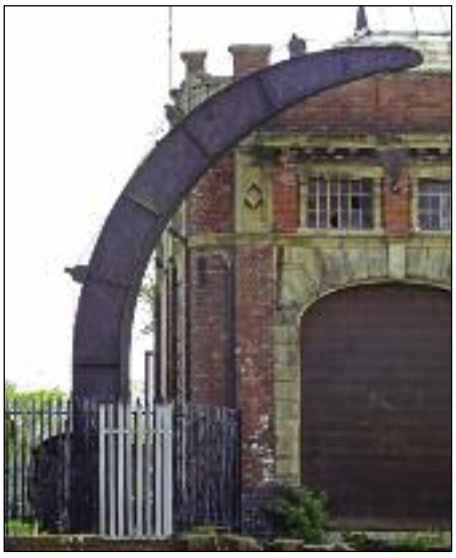
Loyd Grossman, Heritage Alliance Chairman, said:

'Heritage is not simply about our past, it's vital to creating places for the future in which people want to live and invest. Heritage is a major industry in its own right with heritage construction alone worth £9.7 billion in England. People love heritage – nearly four times more people visited heritage attractions in 2016 than attended league and championship football matches. In uncertain times, all politicians should see the value in ensuring that the heritage sector can tell our nation's stories and support social cohesion, rootedness and identity.'

'Banana jib' crane – Hull

Seen alongside the former Trinity House buoy wharf on the River Hull, this crane is very much like the design by Sir William Fairbairn and is listed Grade II with the statement that the design was by Fairbairn although examples were constructed by various builders. The similar crane in Dover is a Scheduled Ancient Monument. There are several other surviving examples around the world.

Chris Hodrien



London News

Lea Valley Heritage Alliance

In April this year the Lea Valley Heritage Alliance was formally launched at a meeting held at City Hall in London. This is an umbrella organisation involving a number of groups and attractions in the Lea Valley including The William Morris Gallery, Markfield Beam Engine & Museum, the Copper Mill, Walthamstow Pumphouse Museum, A V Roe's Railway Arch, Hackney Wick & Fish Island, Carpenters Lock & City Mill Bridge, Old Ford Lock, The Abbey Mills Pumping Station, Three Mills, Bow Locks, Cody Dock, Trinity Buoy Wharf, The Crystal and S S Robin. The chairman of the Trust is Lindsay Collier with Dr Jim Lewis another prominent participant.

The Alliance is formed from several independent charitable organisations whose purpose is to maintain and promote the area's heritage. Resources and or support have been provided by the London Legacy Development Corporation, the Greater London Authority and the Lee Valley Regional Park.

Funding or support has also been provided by the Royal Small Arms Trust, The Queen Elizabeth Olympic Park, McMullen's Brewery, Hertford and Wright's Flour Mill at Ponders End. It is recognised that this relatively small area has an extremely rich industrial heritage. It is claimed that 'this small part of the world was responsible for more industrial breakthroughs than any other place on earth'.

In 1816 George Lovell at the Royal Small Arms Factory (RSAF) introduced a method of weapons inspection which paved the way for RSAF to become the first factory in Britain to achieve genuine mass production. In 1886 Edison and Swan opened their factory in Ponders End, starting Enfield's long association with the electrical industries. Swan's work led to the discovery of the first man-made fibre. The vacuum flask was invented by Sir James Dewar and in 1904 the electronic diode valve was invented by Professor Ambrose Fleming. In 1912 Charles Belling produced the infrared electric fire bar. The world's first wire television distribution system was developed by Belling and Lee. Pulse Code Modulation, an early form of digital communication, was invented by Alec Reeves. Thorn EMI Ferguson, based in Enfield and Haringey, developed the first solid-state television receiver in 1967. They also introduced the Halogen Cooker. Other notables associated with Enfield are the computer pioneer Charles Babbage and Sir Joseph Bazalgette. Further south the Lower Lea Valley was the cradle of a nineteenth century chemical industry. New organic dyes were discovered and manufactured, the world's first synthetic plastic was made and 'petrol' invented. Mention should also be made of the New River, a water supply channel built to carry drinking water from springs in Hertfordshire to the City of London and first opened in 1613.

Robert Carr

Another gasholder listed

It was a pleasant surprise to hear the good news that Historic England have listed a gasholder in South East London. Gasholder No.13 at the former Old Kent Road gasworks was listed grade II on 6 June this year. Built 1879 – 1881 to the design of

Gas holder No13 now listed

the engineer George Livesey for the South Metropolitan Gas Company, this holder was the largest in the world when built with a capacity of 5.5m cu ft. It was a pioneering structure to an entirely new design that treated the guide frame as a cylindrical lattice shell, and every aspect made use of cutting-edge technology. The bell incorporated mild steel for the first time and the tank was the deepest then built. Compared with previous gasholders the structure of the guide frame was light and slender. Architecturally this gasholder is of considerable interest departing from the traditional use of applied decoration and relying entirely on the purity of its structural form – an early example of modernism. George Livesey's gasholder No.13 was a highly influential prototype widely copied.

Robert Carr

Kew Bridge Water and Steam Museum

At the Kew Bridge Water & Steam Museum in West London work is well advanced in the new electric house. This will demonstrate the pumping of water using electricity and there will be a variety of generators, pumps and auxiliary equipment on display. A spectacular exhibit will be a mercury arc rectifier which it is intended to have working. This will certainly catch the eye of the general public. The display will cover the pumping of water following the withdrawal of steam engines, the most recent exhibit being a 1986 control panel from the London Ring Main. Being more than 30 years old, this is already industrial archaeology. Present-day equipment is now quite different.

A splendid new exhibit has been installed near the entrance to the Museum. This is a mock up of a well in which the water was raised by a small reciprocating steam engine mounted at the top. The mechanism is driven by an electric motor, and you can go downstairs to see the action of the pump rods and so on. There are two sets of bucket pumps, one of two throw and one of three throw configuration. This new exhibit at Kew Bridge is a first rate piece of restoration both in terms of its conception and its meticulous realisation. The work was carried out by Richard Albanese and a gang of volunteers. The project to restore this pumping set received a Dorothea Award and a plaque was recently unveiled alongside. This is the second Dorothea Award received by the Museum.

Robert Carr

Longwater Pumping Station, Marsh Lane, Haringey

The proposals put forward by bus and coach company Go Ahead involve the total demolition of the former Longwater Pumping Station on Marsh Lane to expand their neighbouring bus depot. The Victorian Society believes the demolition of a locally listed building is unnecessary in this case and would obliterate an important part of the local area's history, all to allow space, which could be found elsewhere,.for a few more buses

Victorian pumping stations were often a source of great civic pride in the nineteenth century, reflecting the obvious importance of the

Longwater Pumping Station

provision of a clean water supply. The Longwater Pumping Station is a handsome, red brick building that has great character and was built at considerable expense. This importance is reflected in its locally listed status, but as it does not currently have nationally listed status it is vulnerable to demolition.

The recent application for demolition from the Go Ahead group has been refused on the grounds of insufficient information for the restoration of the site, but there is little doubt that this is simply a momentary setback and Go Ahead will come back shortly with a reapplication.

Because demolition rather than redevelopment is proposed, planning permission is not needed in this case. The Victorian Society urges Haringey Council to serve an Article 4 notice, which would make planning permission a requirement and would therefore enable a more balanced judgement on the proposed loss of a heritage asset.

Mark Sissons

Forging Ahead wins National Lottery support

A once-in-a-lifetime opportunity to save landmark community and commercial buildings from demolition and rebuild them at the **Black Country Living Museum** has been awarded £9.8m from the National Lottery.

Some of the buildings identified to be moved brick-by-brick to the Museum include West Bromwich's Gas Showroom and Dudley's Woodside Library – both the focus of strong community support to save them. Others, including Wolverhampton's Elephant & Castle Pub and Lye's Marsh & Baxter's Butchers, will be recreated from archive material and images.

The hugely ambitious scheme – which will create 450 jobs in the local area – will allow the Museum to tell the story of the Black Country up to the closure of the Baggeridge Coal Mine in 1968. It will also transform the Visitor Welcome and Learning facilities.

Ros Kerslake, CEO of the Heritage Lottery Fund, said: "The Black Country Living Museum is one of the UK's most popular open-air museums bringing knowledge of the country's industrial past to a national and international audience. It also has a reputation for working brilliantly with local communities. These latest plans reflect an ongoing commitment to sharing the stories of those who lived in the area and who made it what it is today. Our funding, which is made possible thanks to National Lottery players, will help update the wider site making it a visitor attraction truly fit for the twenty first century."

The £21.7m project BCLM: Forging Ahead forms Phase One of the Museum's 40 year Masterplan and will see the Museum expand by a third, transforming the site with this new major historic development focused on the period 1940s-1960s and improved visitor facilities.

An initial development grant of £400,000 will allow the Museum to undertake detailed planning proposals and significant historic research, firming up plans to:

- Build a new historic town;
  The number of historic buildings will increase by 34% and the number of collections on display to the public will double. The Museum will translocate, recreate and replicate key buildings from the area which reflect the lives and stories of people who lived in the Black Country during the 1940s-60s.
- Construct a new visitor centre and car park;
  A contemporary visitor centre will provide a juxtaposition against the historic site. This will see the Museum 'turn its face' to Castle Hill and reposition its car park and Visitor Welcome route.
- Create a new learning centre;
  The Museum's current Rolfe Street Entrance Building will be repurposed and refurbished as a contemporary Learning Centre and a complementary Industrial Learning Space will be created at the heart of the site. Together, they will enhance the Museum's capacity to host over 80,000 school children a year.

These developments will provide a 'stage' on which to explore questions around several themes including how globalisation affected trade and industry and the origins of the region's richly diverse population, each drawing parallels to how the region continues to innovate.

Over the coming months the Museum will continue to work closely with its local communities to build a picture of the post-war Black Country in order to submit a second-round application to the Heritage Lottery Fund in October 2018 to release the rest of the funding. If successful, construction will begin with a view to be completed in 2022.

Buildings that the Museum has identified for translocation include:

- West Bromwich Gas Showroom (High Street, West Bromwich);
- Woodside Library (Stourbridge Road, Woodside, Dudley);
- William Griffin & Sons Proving House (Woods Lane, Cradley Heath);
- J H Lavender Aluminium Foundry (Crankhall Lane, West Bromwich).

Buildings that the Museum has identified for re-creation using archival material and images include:

- Harris & Pearson Brickworks (Brierley Hill);
- Elephant & Castle Pub (Wolverhampton);
- NHS Clinic (Rubery Owen Works, Darlaston);
- Stanton's Records (Hall Street, Dudley).

Buildings that the Museum has identified for replication include:

- Burgin's Newsagents (Wolverhampton Street, Dudley);
- Marsh & Baxter's Pork Butchers (Lye);
- Laurie Thomas Hairdressers (Tividale Road, Tipton);
- A West Bromwich Building Society Branch (Cape Hill, Smethwick, 1957).

These developments will provide a 'stage' on which to explore questions around several themes including:

- Legacy – contextualising the region's continuing legacy in its rich industrial past;
- Migration – exploring the origins of the richly diverse population we see today;
- Movement – looking at the movement of the goods and services around the world and the impact of globalisation on industry;
- Innovation and entrepreneurship – nurturing entrepreneurs and manufacturers of the future through a programme of inspirational steam activities;
- Real lives, real stories – achieving authenticity in the portrayal of the stories of the people of the Black Country through academic research and a deep understanding of the people who once lived and worked there.

Established in 1978, the Black Country Living Museum attracted over 300,000 visitors in 2016.

New Director at Sheffield

Helen Featherstone has been appointed as the new Director of Sheffield Industrial Museums Trust.

Locally based, Helen joined the trust in July 2017 and brings with her a wealth of experience having worked in the arts and cultural sector for almost twenty years.

Helen is leaving the Arts Council England, where she held a national role as Senior Manager for Engagement and Audiences. She lived in Sheffield for over 30 years and attended the city's Dobcroft and Silverdale schools before completing an MA in Cultural Policy and Management at Sheffield Hallam University.

The appointment follows the retirement of long-standing Chief Executive, John Hamshere, in June. During his 23 years of service, John worked tirelessly to bring investment into the trust's three heritage sites, Kelham Island Museum, Abbeydale Industrial Hamlet and Shepherd Wheel Workshop

Helen Featherstone, the new director of Sheffield Industrial Museums Trust

View from a drone

Ever wondered what Warren Moor chimney looks like from above? Wonder no more – and see what you can do with a drone. Well worth a look. youtu.be/azsVD-GIF_g

Mark Sissons

St Pancras Gasholders

Now that work is nearing completion on the relocation of the triplet gasholder guide frames to the north east of St Pancras railway station we can see what the architects, Wilkinson Eyre, had in mind. Although flats have been built inside the guide frames, the result is surprisingly realistic and approximately recreates the view one had when the gasholders were in use and the bells inflated with gas. Things now look surprisingly like old times. The photograph was taken from a moving train entering St Pancras railway station.

Robert Carr

European Route of Industrial Heritage UK Coordinator – volunteer role description Expressions of interest are invited

The coordination of ERIH activity in the UK is currently being reviewed and reconfigured. The role is currently undertaken by Jonathan Lloyd on a voluntary basis and this amounts to the equivalent of about 3 days per week. Jonathan will be retiring from his role later this year and we are exploring different options for delivering the role.

The role has been divided into three main components. These could delivered by one person, as at present, or by a number of people. The components are:

1. **UK representation on ERIH Board**
   Attendance at ERIH board meetings (4 per year)
   Written UK activity report to each board meeting
   Board generated tasks
   Strategic work within the UK – e.g. liaison with other heritage organisations
   Overseeing UK coordination activity (including items 2 and 3 below)
   Chair ERIH UK national meetings

2. **ERIH UK member support:**
   Maintaining contact with existing members mainly by email and phone
   Maintaining UK email contact list
   Responding to phone and email enquiries about ERIH
   Organising ERIH UK national meetings (3 or 4 per year)

3. **Promotion and outreach**
   Attracting new members – including following up membership enquiries
   Regional Route development – existing and new routes
   Presenting and representing ERIH at conferences, events and meetings
   Use of social media to promote and publicise ERIH activity in the UK

Number 1 above will require some travel in the UK and Europe. In addition to the skills required for number 2 above, ideally this person will also have experience of the heritage sector in the UK and an interest in industrial heritage.

Number 2 above is essentially a desk-based role and will require access to a phone and computer and the ability to use Microsoft Office.

Number 3 above will require some travel within the UK and it will appeal to someone who has the skills and qualities to present ERIH on a one to one basis and also to large and small groups. The ability to use social media and Microsoft Office (particularly PowerPoint) will be important.

Elections for ERIH Board membership take place at the General Assembly which is part of the Annual Conference and this year will be held in Copenhagen from 20-22 September. The term of office for board members is 3 years.

Expenses will be available for any travel that has been pre-authorised by the ERIH Secretary General.

If you would like to express an interest in one or more of the above roles or for more information or an informal discussion, please contact Jonathan Lloyd: uk@erih.net — 01952 587615

AIA Roles of Council members, including co-opted members

Bill Barksfield	Web master
Peter Neaverson	Digital Initiative judge Outstanding Scholarship Award Judge. Outstanding Scholarship coordinator Travel Bursary coordinator. Travel Bursary judge Restoration Grant panel member
Chris Barney	Editor IA News Local Society Publication Award judge Best Creative Re-use of an Industrial Building Award judge
Dr Robert Carr	British Archaeological Awards liaison TICCIH-UK representative Restoration Grant panel member
Tony Crosby	Restoration Grant liaison with donor APPG representative HLF IM&T representative
David de Haan	Honorary Secretary, Liaison Officer Restoration Grant panel member HLF IM&T representative
Stephen Dewhirst	Dorothea Award coordinator
Kate Dickson	E-FAITH Liaison Best Creative Re-use of an Industrial Building Award judge.
Keith Falconer	Chairman, APPG representative HLF IM&T representative Best Creative Re-use of an Industrial Building Award judge Restoration Grant panel member.
Roger Ford	Sales Officer.
Bruce Hedge	Membership development.
John Jones	Honorary Treasurer
Shane Kelleher	Industrial Heritage Support Officer Archaeological Awards coordinator
Michael Messenger	Professional Publication judge
Stephen Miles	Conference Booking Secretary Restoration Grant panel member
Ian Miller	Archaeological Awards judge
Roy Murphy	Publicity
Dr Michael Nevell	Vice Chairman Co-editor IA Review Dissertation Awards judge
Prof Marilyn Palmer	Hon President Dissertation Awards coordinator Publication Awards coordinator
Amber Patrick	Planning Casework Officer, Archaeological Report judge Best Creative Re-use of an Industrial Building Award coordinator.
John Powell	Librarian and Archivist
Dr Tegwen Roberts	Social media Dissertation Awards judge
Mark Sissons	Restoration Grants coordinator Best Creative Re-use of an Industrial Building Award judge.
Mark Watson	Chair: TICCIH-UK Best Creative Re-use of an Industrial Building Award judge.
Dr Ian West	Co-editor IA Review Health & Safety Officer

The Council is always anxious to recruit new members to spread the work and further the aims of the AIA. In particular we would like to recruit a Communications Manager. If you would like to help with this or in any other way please contact the Secretary, David de Haan.

EMIAC 93

Engineered in Northampton

Saturday 14 October 2017
National Training Academy for Rail, Northampton

The programme looks at three Northampton based companies. Nineteenth century iron founder EH Barwell's products can still be found in southern England. In the twentieth century the Express lift Company's lifts were to be found across the world and their innovative testing tower is once again being used for development work. Alongside their train care facility, Siemens have recently opened a new training facility for the railway engineers of the twenty-first century.

Admission is by advanced booking only as this is a secure site

Details from www.niag.org.uk

E-FAITH in Barcelona

October 20-22.

This meeting has become a tradition where volunteers, associations and professionals meet and share experiences.

This year's themes are:

- 'Industrial Heritage – exploring opportunities for education and lifelong learning'
- Preparing the position of industrial heritage for the 2018 European Cultural Heritage Year

On Sunday there will be visits to places in Barcelona that have been saved and re-used thanks to the campaigns of citizens and local associations – showing the power of people.

Information at

industrialheritage.eu/activities/industrial-heritage-weekend-2017

Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review.*

Bristol Industrial Archaeological Society Bulletin, 151 Summer 2017

Bristol Industrial Archaeological Society Journal, 49, 2016

Cumbria Industrial History Society Bulletin, 97, April 2017

The Cumbrian Industrialist, 9, 2017

Dorset Industrial Archaeology Society Bulletin 48, May 2017

Greater London Industrial Archaeology Society Newsletter, 289, April 2017; 290, June 2017

Hampshire Industrial Archaeology Society Focus on Industrial Archaeology, 88, June 2017

Histelec News: Newsletter of the South Western Electricity Historical Society, 65, April 2017

Historic Gas Times, 91,June 2017

London's Industrial Archaeology, 15, 2017

Manchester Region Industrial Archaeology Society Newsletter, 154, Spring 2017

Midland Wind and Watermills Group Newsletter, 117, April 2017

Northamptonshire Industrial Archaeology Group Newsletter, 142, Spring 2017

North East Derbyshire Industrial Archaeology Society Newsletter, 66, May 2017

Piers: the Journal of the National Piers Society, 123, Spring 2017

Surrey Industrial History Group Newsletter, 214, May 2017

Sussex Industrial Archaeology Society Newsletter, 174, April 2017

Sussex Mills Group Newsletter, 174, April 2017

Trevithick Society Newsletter, 175, Spring 2017

WaterWords: News from the Waterworks Museum, Hereford, Spring 2017

Welsh Mines Society Newsletter, Spring 2017

Worcestershire Industrial Archaeology and History Society Newsletter, 50, April 2017

Yorkshire Archaeological Society Industrial History Section Newsletter, 100, late Spring 2017

Books

Photographing Historic Buildings, by Steve Cole, Historic England 2017. 232pp, 490 illustr. ISBN 978-1-84802-269-0. £20 paperback.

This book is aimed at those with an interest in and or a need to record historic buildings as part of their job or hobby who are not professional photographers. It's a very practical manual about how to look at buildings, light them and present them via photography. Steve also looks at the equipment and techniques needed to create accurate and truthful images. And he discusses the practicalities of location photography, including health and safety issues, permission and legal issues. Illustrated with examples of good and back practice Steve draws on his 40 years of professional experience to create this hugely informative and user-friendly handbook for the amateur photographer in the historic environment.

AIA members can claim a 20% discount with the code PHBAIA. Post and pkg is free.

Vintners Railway Gazetteer: A Guide to Britain's old railways that you can walk or cycle, by Jeff Vintner, The History Press 2017, 168 pp, ISBN 978-0-7509-6976-5, paperback £19.99.

A revised edition of a comprehensive gazetteer of all the known railway routes of two miles or more in England, Wales, Scotland and Ireland which it is possible to walk or cycle arranged by county with six figure map references, descriptions and notes on condition. Most of the routes personally surveyed by the author, ex-President of the Railway Ramblers Society. A fascinating reference book even for those with little intention of making practical use of its information but invaluable for those who do. Well illustrated.

James Watt: Making the World Anew, by Ben Russell, Reaktion Books, 2014. Pp. 280. ISBN 978-1-78023-375-8. £17.95 hardback.

Among the many treasures in the collections of the Science Museum in London is the complete workshop of the Scottish engineer James Watt (1736-1819), acquired in its entirety from the attic of Watt's Birmingham home in 1924, where it had been left as an industrial shrine since his death in 1819. Watt is best known for his pioneering work on the steam engine, but the workshop contains very few engine-related items. Instead, it is filled with jars of chemicals, sculpture-copying machines and materials, a profusion of instruments and objects and evidence of Watt's many diverse projects. Traditional biographies of Watt have concentrated on the steam engine, but Ben Russell tells a richer story, exploring the processes by which ephemeral ideas were transformed into tangible artefacts and the multifaceted world of production upon which Britain's industrial revolution depended. James Watt: Making the World Anew is a craft history of Britain's early industrial transformation as well as a prehistory of the engineering profession itself. It explores the motivation for making things, looking not only at what was produced but also why, drawing on a rich range of resources – not just archival material and biographies on Watt but also objects themselves, and sources from fields as diverse as ceramics, antique systems of proportion, sculpture and machine making. Generously illustrated, James Watt is a unique, expansive exploration of the engineer's life, not as an end in itself but as a lens through which the broader practices of making and manufacturing in the eighteenth and early nineteenth centuries can be explored.

Nominate a history maker

The Association of Independent Museums Biffa Award have just announced the first round of projects to be supported by the 'History Makers – People who shaped our world' programme. Sharing a fund of £170,000, each project will tell the story of their chosen historical figure and how their work and achievements have shaped the world we live in today.

Funded by Biffa Award with support from the Landfill Communities Fund, the programme is funding AIM member museums to create new exhibitions that will inspire the public through the lives and achievements of extraordinary, historical figures.

The successful projects in Round 1, with exhibitions opening in 2018, will focus on the work of historic figures from Engineering and Science. They are:

'Digging Deeper' at the London Transport Museum which will explore the engineering innovations which made travelling deep under London possible and, as Crossrail begins operation, highlight James Henry Greathead's continuing influence around the world.

'The Father of Modern Forensics' at The National Justice Museum in Nottingham which will enable children and young people to learn about the life and achievements of Sir Bernard Spilsbury, inspiring interest and further study in forensic science.

'Hawkshaw and Barlow Untold' at The Clifton Suspension Bridge Visitor Centre in Bristol which will raise awareness of the lives and achievements of engineers Sir John Hawkshaw and William H Barlow through a new interactive exhibition.

The History Makers grant programme will next be accepting applications in autumn 2017 and 2018.

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

20 – 22 September
ERIH ANNUAL CONFERENCE
Copenhagen
Industrial Tourism: Linking the past with the present and future

7 October 2017
ESSEX INDUSTRIAL HERITAGE FAIR
Wat Tyler Country Park (former Nobel explosives works)
essexiag@gmail.com

7 – 8 October 2017
COMMUNICATION OF WORLD HERITAGE VALUES
International Institute for Cultural Heritage, University of Birmingham in association with World Heritage UK Ironbridge will hold a special international meeting to discuss research and global policy. The event will be immediately followed (9-10th October) by the third annual conference of World Heritage UK For further information and if you have any questions please email j.g.davies@bham.ac.uk

8 October 2017
NATIONAL STIRLING ENGINE RALLY
Waterworks Museum, Hereford in conjunction with the Stirling Engine Society
waterworksmuseum.org.uk

10 October 2017
INDUSTRIAL HERITAGE IN THE UK
Mutations, conversions & representations.
University of Rennes, Brittany search – Industrial Heritage in the UK Rennes

14 October 2017
EMIAC 93
Engineered in Northampton
National Training Academy for Rail
See page 27

20 – 22 October 2017
E-FAITH WEEKEND
Barcelona
See page 27

28 October 2017
DEVIZES CONFERENCE
www. wiltshiremuseum.org.uk

22 – 28 June 2018
AIA ANNUAL CONFERENCE, CAITHNESS
See page 20

9 – 16 September 2018
TICCIH CONGRESS
Santiago Chile
Industrial Heritage Making a Sustainable future by understanding the past

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

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

THE AIA ON TWITTER

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

AIA Spring Tour to the Netherlands — all aboard the Elfin

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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.

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