

# INDUSTRIAL ARCHAEOLOGY NEWS

**147**  
WINTER  
2008

THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

FREE TO MEMBERS OF AIA



Wiltshire conference • Modern Military Matters • AIA Awards • letters • Robin's rivets  
industrial sites at risk • Goonvean engine • Lancashire mills • regional news



# INDUSTRIAL ARCHAEOLOGY NEWS 147 Winter 2008

## Honorary President

Prof Angus Buchanan  
13 Hensley Road, Bath BA2 2DR

## Chairman

Tony Crosby  
261 Stansted Road, Bishop's Stortford, Hertfordshire  
CM23 2BT

## Vice-Chairman

Mark Sissons  
33 Burgate, Pickering, North Yorkshire YO18 7AU

## Secretary

Barry Hood  
9 Kennerty Park, Peterculter, Aberdeen AB14 0LE

## Treasurer

Bruce Hedge  
7 Clement Close, Wantage, Oxfordshire OX12 7ED

## IA Review Editor

Dr David Gwyn  
Nant y Felin, Llanllyfni Road, Pen y Groes,  
Caernarfon LL54 6LY

## IA News Editor

Dr Peter Stanier  
49 Breach Lane, Shaftesbury, Dorset SP7 8LF

## Affiliated Societies Officer

Christine Ball  
75 Banner Cross Road, Sheffield S11 9HQ

## Conference Secretary

John McGuinness  
24 Belmont Road, Uxbridge, Middlesex UB8 1RE

## Endangered Sites Officer

Dr Mike Nevell, Director  
University of Manchester Archaeology Unit, University of  
Manchester, Oxford Road, Manchester M13 9PL

## Librarian and Archivist

John Powell  
c/o IGMT, Ironbridge, Telford, Shropshire TF8 7DQ

## Publicity Officer

Mark Sissons  
33 Burgate, Pickering, North Yorkshire YO18 7AU

## Recording Awards Officer

Dr Victoria Beauchamp  
3 Parsonage Court, Parsonage Crescent, Walkley,  
Sheffield S6 5BJ

## Sales Officer

Roger Ford  
Barn Cottage, Bridge Street, Bridgnorth WV15 6AF

## Council Members

David Alderton (Heritage Link)  
Mike Bone  
Dr Robert Carr (BA Awards)  
Dr Paul Collins (Partnerships)  
David de Haan (Liaison Office)  
Richard Hartree (AIA Council projects)  
David Lyne (Conservation Award)  
Michael Messenger (Conference Bookings & website)  
Stephen Miles  
Roy Murphy  
Dr Miles Oglethorpe (TICCIH)  
Prof Marilyn Palmer  
Paul Saulter (Overseas trips)  
Ian West (Health & Safety)

## Honorary Vice-Presidents

Sir Neil Cossons Prof John Hume Stuart B. Smith

## Liaison Officer

Anne Lowes, AIA Liaison Office, The Ironbridge Institute,  
Ironbridge Gorge Museum, Coalbrookdale, Telford TF8 7DX.  
Tel: 01325 359846.

e-mail: aia-enquiries@contacts.bham.ac.uk

Website: www.industrial-archaeology.org.uk

## COVER PICTURE

*Tending the Lancashire boiler at the Crofton Pumping Station during the visit by AIA conference delegates (see page 3)*  
Photo: Steve Dewhirst

## AIA Wiltshire Conference 2008

*This year's annual conference was at Lackham College near Chippenham, where delegates were able to visit the agricultural museum on site. Amazingly the weather stayed dry for all the week. A full programme of lectures and tours with superb notes was organised by Pam Slocombe and members of the Industrial Archaeology Committee of the Wiltshire Archaeological & Natural History Society. Extra material for this report has been provided by Barry Hood, Richard Hartree and Tony Jervis.*

### Roger Ford

Friday was, as usual, seminar day (see page xxx), the main conference commencing after dinner with a welcome from retiring AIA Chairman Professor Marilyn Palmer. Peter Stanier then gave an exhaustive talk outlining IA in Wiltshire, covering almost every type of endeavour carried out in the county.

In a departure from the usual format, Saturday was spent on campus. The first speaker was Ken Rogers who discoursed on the Wiltshire woollen industry, which, surprisingly, attained its apogee in the reign of Henry VIII. There remains much evidence of the industry in and around Trowbridge which saw factory developments in the nineteenth century. Next up was David Hyde on the activities of the Great Western at Swindon, where many thousands were employed in the engineering works which extended to 320 acres. The morning was rounded off by Mike Stone, curator of Chippenham Heritage Centre, who spoke about Rowland Brotherhood and the history of Westinghouse Brakes, this firm starting in railway engineering in 1841. The founder was a friend of both Brunel and Gooch. Westinghouse moved in 2005 from Chippenham to a purpose-built factory in Melksham, under the guise of Knorr-Bremse KG.

In the afternoon came members' contributions, ranging from a DVD on the restoration and use of a 1914 threshing machine, through John Watts' amazing range of water-pump pictures, to John Selby who talked on IA from unexpected sources. Geoff Wallis then pointed out the lengths that so-called 'health and safety' can go in defiance of common sense. The session after tea was devoted to the various AIA awards, when winners gave brief presentations (see page 8). The Annual Dinner took place in the original Lackham Manor House, a well panelled plushy ex-stately home, now much in demand for weddings etc.

Sunday morning began with the AGM of the AIA, with Barry Hood gave his Secretary's report of the Council and Bruce Hedge outlined his Treasurer's report. With Marilyn Palmer standing down, Tony Crosby was elected our new Chairman, with Mark Sissons as Vice-Chairman. This was followed by two short presentations, first by Paul Saulter who is organising a Romania visit in April 2009, and then by Neil Wright who gave a preview of the 2009 conference at the University of Lincoln, 4-10 September.

After refreshments, Wayne Cocroft delivered the Rolt Memorial Lecture entitled 'Dan Dare's Lair – the industrial archaeology of Britain's post-war technological renaissance.' While WWI was the chemists' war, WW2 was the scientists' war out of which grew atomic technology and the era of Big Science. Wayne's wide ranging lecture covered wind tunnels, guided weapons establishments, the Blue Streak rocket project, the Spade Adam and Needles rocket test sites, and places such as Fort Halstead, Foulness, Orfordness, Harwell, Sellafield, and Jodrell Bank. Not forgotten were the facilities, offices and employees' housing at many of these research sites. This ended the formal conference.

That afternoon came first outings of the conference, all with a canal theme. Nick



*Crofton pumping station and chimney, seen from the Kennet & Avon Canal*  
Photo: Barry Hood



*The beam of the 1812 Boulton & Watt engine at Crofton*  
Photo: Steve Dewhirst



'Salmon' tank locomotive at Blunsdon station on the Swindon & Cricklade Railway. This Andrew Barclay loco of 1942 was restored over seven years  
Photo: Barry Hood



The Barge Inn at Honey Street

Photo: Barry Hood



The stable yard at Beckhampton

Photo: Barry Hood

McRamsey led one tour to Claverton pumping station to see the giant waterwheel, which drives a beam engine capable of pumping 98,750 gallons per hour up to the Kennet & Avon Canal; its restoration gained our award from the 1992 conference. The trust volunteers are also restoring a crane from Burbage Wharf. Next there was a canalside stroll to admire the Dundas aqueduct and a short section of the Somerset Coal Canal.

Other delegates went with Doug Roseaman east on the Kennet & Avon Canal to visit the famous beam engines at Crofton where the pumping station was built in 1807 to raise water 40 ft to the canal's summit level, via a feeder leat. On arrival we were greeted by the local volunteers, all very smart in their white overalls. It was a busy site and it was pleasing to see so many families with their children. The two magnificent beam engines are steamed from a coal-fired Lancashire boiler on Bank Holidays and other special days. The 1812 engine is the oldest Boulton & Watt beam engine still in use in its original setting in the world. It was brought back to life in 1970, followed by its 1846 companion in 1971. Crofton is one of the best preserved IA sites in the region and manned by an enthusiastic and competent team of volunteers.

Pam Slocombe guided the third group to Pewsham near Chippenham where members of the Wilts & Berks Canal Trust showed the remains of the three locks, a spillway, a dry dock and a partially collapsed culvert. The party returned to the National Trust village of Lacock, containing a mid-sixteenth century converted abbey, tithe barn and original brewhouse, for tea and a visit to the Fox-Talbot museum of photography. Pam delivered the evening lecture on Wiltshire agriculture. The county has a varied selection of malshouses and brewhouses amongst many different architectural styles, whilst one of its curiosities is the occurrence of very hard sarsen stones which occur at random in the fields and can be dressed and incorporated into stone buildings.

On Bank Holiday Monday, Ivor Slocombe led a tour first to Honeystreet Wharf on the Kennet & Avon Canal, where the nineteenth-century Huntley's family remained in the family until 1986. Then to the Barge Inn (1810, renovated 1858 after a fire, and originally a staging post for canal horses), admiring 1874 workers' canalside cottages. By coach then, via a field of sarsen stones at Lockeridge Dene, past Silbury Hill, to Beckhampton racing stables. These started life as an inn opened beside the new Bath-Calne turnpike road in 1745, with extensive stabling to cater for the necessary changes of horses. After the railway arrived, a West-country trainer bought the inn and converted it to racing stables. The original buildings around the courtyard (laid with sarsen setts) now house thoroughbreds, and visitors are even able to touch the Royal racing colours – said to cure scrofula. Following lunch at the Crown, Broad Hinton, we boarded a train on the Swindon & Cricklade Railway, and inspected the shed contents at Hayes Knoll station.

Meanwhile a second group visited Bradford-on-Avon with Pam Slocombe. A zig-zag descent



Tony Yoward picks up a few insider tips at the Beckhampton racing stables

Photo: Mark Sissons



In steam at the Crofton beam engines

Photo: Steve Dewhurst



Textile mill landscape at Bradford on Avon

Photo: Steve Dewhurst



An extremely derelict water mill at the Avoncliff weir

Photo: Steve Dewhurst

passed the site of a rug factory and emphasised the residential developments of the seventeenth to nineteenth centuries, most of which can only be reached on foot. At their base is the Ladywell, which originally powered an underground waterwheel, still in situ, then fed the cisterns of the Seven Stars Brewery. This was a complex of buildings dating from at least the late sixteenth century. There was a tanyard and a cloth factory in the mid-nineteenth century, the locus being converted to offices and flats in 1990. Next port-of-call was Avoncliff, a classic IA site containing relics of many past industries on the River Avon, the Kennet & Avon Canal and the railway, but with difficult road access. A weir on the river gave rise to a flock mill, now a private house, and on the north side a dilapidated small building was once was a chemical factory. The remarkable workhouse buildings became the HQ of the British Museum during WWII. Mike Stone led a post-lunch walk around Chippenham to take in the site of the first Rowland Brotherhood works, the remains of Silcock's foundry, Westinghouse and Saxby & Farmers former locations, then continuing over the footbridge, giving a station overview, then on to the restored and re-erected Buttercross.

Monday evening's diversion consisted of a DVD by David Pollard (introduced as 'Mr Quarry') of the Bath stone mines, shot five years ago. It is estimated that 5 million cubic feet have been extracted; current production exceeds 10,000 tons annually.

Pam Slocombe was busy again on the Tuesday, taking a party to Trowbridge where the emphasis was on the woollen textile industry. Trowbridge was described as the Manchester of the South West by 1820 but the woollen industry could not compete with cheaper imports and gradually declined during the nineteenth and twentieth centuries. The closure of Salter's Home Mills in 1982 marked the end of the West of England wool producing industry. The mill now



The former Westinghouse premises at Chippenham

Photo: Steve Dewhirst



Honey Street Wharf on the Kennet & Avon Canal

Photo: Barry Hood



Castle Mill at Trowbridge

Photo: Steve Dewhirst



A Trowbridge clothier's house with attached workshops

Photo: Steve Dewhirst

houses the Trowbridge Museum which is dedicated to the history of the town and its former industry. Our guide, Ken Rogers, took us to Castle Court Factory (1830), once full of spinning jennies, and the adjacent Castle Factory (1828). Both building now house offices. We also saw a teasel drying house, domestic weaving shops, other spinning workshops, terraces of weavers' houses and some handsome clothiers' houses. There was a lunchtime stop in Great Hinton at The Linnet which has an attached woollen workshop of 1816 which became the pub's brewhouse. The afternoon visit was to Alex Moulton Bicycles and the Moulton Development Factory at The Hall, Bradford-on-Avon. We spent a very pleasant half hour with Dr Alex Moulton, a renowned engineer who has spent his life developing suspension systems for cars, buses and other vehicles. He designed the suspension for the Mini car in the 1950s and for the design and production of the Moulton bicycle from 1962. He showed us 'The Hall' of 1620 and a large 1901 greenhouse converted into a museum for Moulton Bicycles. The last visit was to J. & T. Beavan's tannery, Sawtell's feather and bedding factory and a spa, all at Midlands, Holt.

Nicol Smith took a second group to the Knorr-Bremse Rail Systems factory in Melksham where we saw an amazing video on the production of station platform door systems, which are in demand from metro systems worldwide. The biggest project currently is an order of 1,100 sets for Dubai. We then toured the works, particularly the areas where Westinghouse fittings arrive from the train operating companies for complete repair and refurbishment. Our trip then took us right across Salisbury Plain, with John Watts providing the travelogue in his inimitable style. We took lunch at Harnham Mill, a fifteenth-century building, replacing a much earlier structure built originally as a paper mill. There are no less than three millraces. After many industrial metamorphoses the mill became a hotel and



Warminster Maltings

Photo: Steve Dewhurst



The 'Glue Pot' in the Swindon Railway Village

Photo: Barry Hood



One of the traditional malting floors at Warminster

Photo: Steve Dewhurst



Wadworth's brewery of 1885 is a prominent feature in the centre of Devizes

Photo: Steve Dewhurst

restaurant in 1938. The afternoon was devoted to a walk around the water meadows, originally leased from the cathedral, where the various sluices (hatches) and water channels designed to flood the area to bring on the grass for foraging were explained by Hadrian Cook.

The third group, led by Doug Roseaman, started at the Kennet & Avon Canal Trust's museum in the old wharf warehouse at Devizes. This was followed by a 1½ mile walk down the spectacular restored Calne flight of 29 locks to create an appetite well satisfied by lunch at the Barge Inn, Seend. Mike Stone then led a walk through Calne, taking in such diverse sights as the pond where Joseph Priestley did his experiments with oxygen, the rent offices of the Wilts & Berks Canal Co. and the site where Messrs Harris cured their bacon. This most enjoyable day concluded at the Atwell-Wilson motor museum on the outskirts of the town.

On Tuesday evening all enjoyed a visit to the Chippenham Museum and Heritage Centre, where, following a welcome from the lady Mayor, we partook of an excellent buffet, afterwards adjoining for a conducted tour of the new £11 million Swindon & Wiltshire History Centre, formally opened by the Princess Royal earlier this year. An evening to savour.

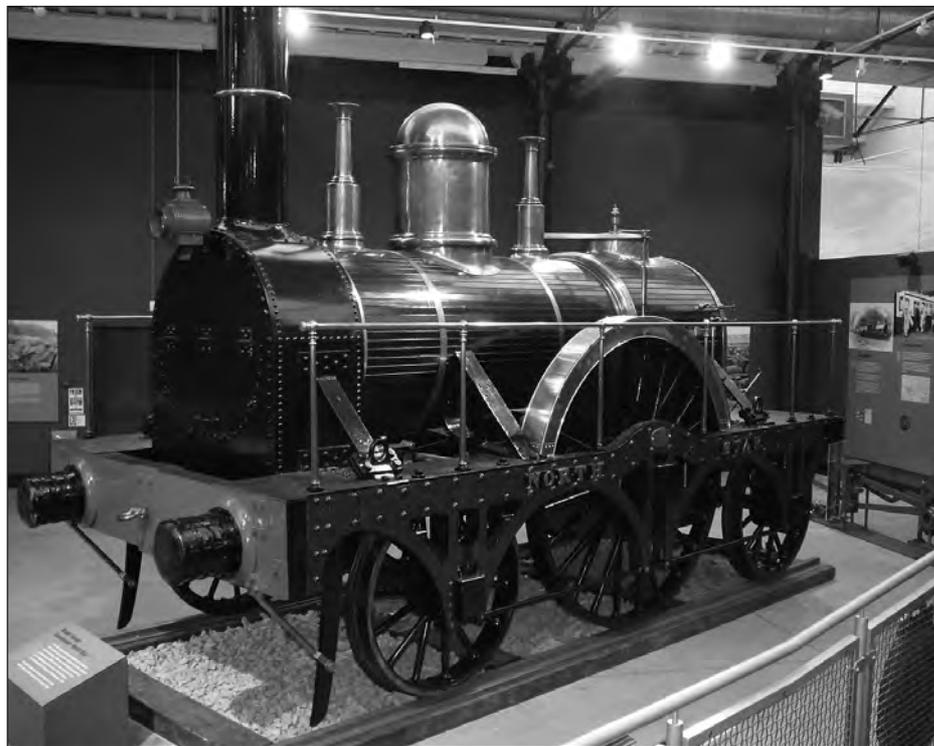
Wednesday was the last day of multiple tours, Pam Slocombe being in charge of a visit to Warminster, once famous for its woollen cloth trade and corn market. In 1720 there were 36 malt houses in town, now only one. Warminster Maltings has over 200 customers in the UK and 50 worldwide. The owner Robin Appel showed us all the processes of malting and kilning. Britain's oldest working floor malting and was founded by the Morgan family in 1840 and remodelled in 1879. Edwin Sloper Beavan joined Westminster Maltings and produced the very first genetically true variety of English Malting Barley called Plumage Archer in 1905. It remained unchanged for 50 years and Beavan was awarded an

Honorary Doctorate by Cambridge University, not bad for a farmer's son who left school at 14! In nearby Westbury we viewed the oldest public swimming pool in the country, given to the town in 1887 by the textile mill owner, W.H. Laverton. The building has recently been refurbished and is in splendid condition under an ornate iron roof.

After lunch at Devizes we visited Wadworth's Brewery Visitors' Centre and the Northgate Brewery of 1885 which has been a major influence on the town's economy and provider of beer in the south of England. We were taken to the stables to meet the four Shire horses which pull the drays in Devizes, then the sign writing section and were impressed by the artistry and talent of the sign writers. We then toured the brewery section. The nice young lady who was our guide promised us five different beer samples. The male members of the AIA were working their way through an interesting and tasteful selection when they were grabbed and marched out of the saloon to attend afternoon tea at the Wiltshire Heritage Museum! Here is one of the finest small museums that you can visit, a surprising treasure trove and a credit to the foresight of its founders and to the society that is running museum. It is run by the Wiltshire Archaeological & Natural History Society, founded in 1853, and moved to its current location in Long Street in 1873.

The second tour was in the hands of Ivor Slocombe and David Pollard. The first stop was at the Eastlays complex of Octavian, where the first 12 who had booked this tour descended 157 steps into Corsham cellars. After passing through airlocks to control the humidity, they entered a vast complex, 90 feet below ground, originally a stone mine, then a C.A.D., which now houses pallets of wine, estimated to be worth a billion pounds in total. An 8-cylinder Lister engine provides the ventilation. The rest of the party went to Bradford-on-Avon to admire Brunel's broad gauge 'wayside station' of 1850 and the Elizabethan buildings close to the bridge. After a short visit to the museum which contains an entire pharmacy, the party returned to collect the troglodytes and then went on to Monks Park Quarry which started in 1877 and worked until three years ago. Numbers of big blocks of building stone (Jurassic limestone), valued at hundreds of pounds apiece, are stacked at this site. 212 steps lead down to 72 acres of subterranean workings, where there are many more cut. After a generous lunch at the Barge Inn beside the Kennet & Avon Canal at Seend Cleeve, we walked over the fields to see remnants of the iron ore pits, tramway and the site of the blast furnaces works. The original ironmaster's house has furnace slag incorporated into the gateposts. Next, up onto Box Hill for gargantuan portions of cakes and tea at the Quarryman's Arms before exploring the face of Hazelbury Quarry, situated in a back garden. Worked from Roman times until 1968, it extends underground to 320 acres, over the top of Box railway tunnel in places.

The third group was taken by Nicol Smith to the Invicta Car Co. at Chippenham, a business founded in 2000 by Michael Bristow as a modern re-creation of its historic forebear. Output is less



*The 1925 replica of the broad gauge locomotive 'North Star' in the GWR Steam Museum at Swindon*

*Photo: Barry Hood*

than 12 cars a year. We visited the body and assembly workshops where everything was impeccably clean and the work done with great care. Michael gave us his full attention for an unforgettable visit. Next, to Malmesbury where Ratcliff's Foundry of 1870 was a small foundry, forge and engineering shop for repairing agricultural machinery and traction engines. Later involved with Morris cars, and even servicing domestic radios, the place now mainly repairs hedge cutters and mowers, while the forge is used by an artistic blacksmith who acted as our guide. The final stop was Dauntsey Lock on the Wilts & Berks Canal. Our guide was Rachel Banyard who is one of the prime movers in a venture to restore 2 miles of the canal. Five canalside cottages have been renovated, a lock repaired and the canal dredged, but a road bridge remains a major obstacle. It was a privilege to view this ambitious project.

On Wednesday evening Peter Cavis, keeper of Nestles archives showed a fascinating film of the factory at Staverton. This started as a cloth mill which closed in 1891. It was bought by the Anglo-Swiss Condensed Milk Co. in 1897, which merged with Henry Nestle's firm in 1905. The original plant, which at one time made 2 tons of butter per day, lasted till 1935, with the addition of a tinned making facility. In 1920 the first 12 lorries were bought; in the 1960s production switched from being railway-based to become road-based, and Nestle bought Crosse & Blackwell. It now makes breakfast cereals and yoghurt. Mike Stone finished the evening with a discourse on George Hathaway's butter churn making business of 1867 in Chippenham. Refrigeration sounded the death-knell for this occupation, and they turned to constructing carpet sweepers with a patent of 1929. Being over-engineered, these

were too expensive and caused closure in 1937.

The final day's outings offered a choice of visiting the National Monuments Record Centre in the GWR drawing offices at Swindon under the tutelage of Keith Falconer, or STEAM, the much updated and improved (since our 1992 visit) museum of the GWR, housed in part of the locomotive, carriage and wagon works, under the guidance of David Hyde. Highlights included one of Queen Victoria's train carriages. Both parties then sallied round the railway village, one of the best surviving examples of industrial housing. To a hotel in Marlborough High Street for a substantial lunch, then to the Avonside foundry in Pewsey, supposedly built with left-over stone from the railway embankment, and now a small heritage museum. When a Devizes well-boring machinery works went broke in 1899, the owners of this establishment bought all the factory's contents, and moved it into here, running it by line-shafting from a steam engine. They later progressed onto servicing traction engines and the museum contains the remains of a forge, together with its implements, also a patent artesian well-boring machine, mounted on an ex-RAF bomb trolley.

It had been an interesting and instructive week, based in a truly beautiful setting. Grateful thanks particularly to the Slocombes and their helpers for organising the trips, and to John McGuinness et al for organising the conference. Audio-visual technician Mike Read was on hand to ensure the smooth running of all the lectures. We look forward to Lincoln 2009.

# Modern Military Matters: the twentieth century defence heritage of Britain

*The topic for the 2008 pre-conference seminar at Lackham was chosen because the terrain of Wiltshire proved suitable for large-scale military use in the twentieth century. The seminar was a fascinating occasion, bringing together professionals and non-professionals, both groups making a significant contribution to the study and evaluation of twentieth century military sites.*

Marilyn Palmer

Wiltshire's chalk plateau, which had seen extensive ritual use in prehistoric times, leaving monuments like Stonehenge and Avebury, then saw airfields and tank training grounds as well as settlements whose inhabitants suffered forcible eviction for military purposes. The first two papers were focussed on the Salisbury Plain Training Area belonging to the MoD, which covers an area of 37,000 hectares, a space roughly the same size as the Isle of Wight. The advantages of this largely flat and open terrain were obvious to those looking for new training grounds for cavalry in the late nineteenth century. Land purchases in 1897 started a process in which all other types of land-use and users were forced out, as Rex Sawyer, a local historian and author, pointed out. His topic was Little Imber on the Down, a remote village which until 65 years ago carried on its life to a large extent untouched by the outside world. In 1943 the villagers were all required to leave, to hand over Imber to the army for military training. Everyone believed that, after the war, those evicted would be allowed to return and Rex described and illustrated the long campaign against officialdom which was waged by their supporters. In the end, this was unsuccessful and Imber is now deserted and largely destroyed.

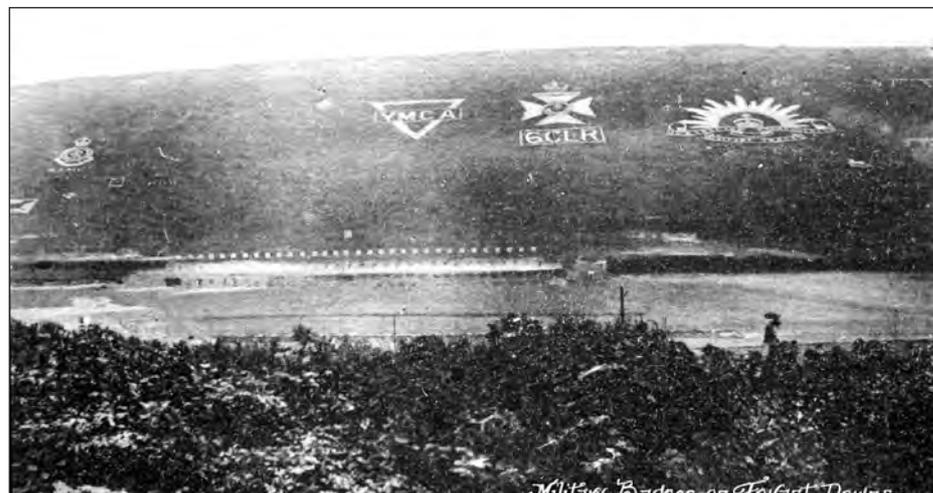
Terry Crawford, also a local historian and author, claimed that few places in Britain experienced more upheaval during the Great War than Wiltshire. Soon after hostilities commenced, hutted camps on and around Salisbury Plain were hastily erected for more than 100,000 men of Kitchener's New Armies. A Canadian contingent of 31,000 men endured the extremely wet winter of 1914-15 there, mostly in tents, and Terry pointed out that with them was the original Winnie-the-Pooh, a bear brought to England by the regiment as an unofficial mascot who was then given to London Zoo!! He also described how evidence of military activities can still be found in many places, ranging from pre-war aircraft hangars and railway platforms to the regimental badges carved in the chalk hillsides near Fovant, on which regular maintenance is carried out by a voluntary group known as the Fovant Badges Society. This is an interesting parallel with the older chalk figures in Wiltshire such as the Westbury White Horse. English Heritage regard the Salisbury Plain Training Area as an area of unique archaeological survival in England, because its use by the army for over a century has meant that it has not been subject to

the same agricultural regime that has levelled many prehistoric remains elsewhere in the country. It is only recently, however, that the twentieth century military remains themselves have also been thought to be of archaeological significance!

Not far from the conference centre at Lackham College is the multi-layered site of MOD Corsham, with components above and below ground relating to nineteenth and twentieth century industrial and military heritage. Jane Phimester described how English Heritage had commissioned Oxford Archaeology to complete a Characterisation Study of the area, aimed at achieving a holistic understanding of the site. She described and illustrated how the nineteenth-century underground stone mines and quarries, where tools and artefacts still survive, were taken over during World War II for military purposes. Tunnel Quarry was converted in 1938 for ammunition storage, and today this vast facility retains a high level of survival, with an underground platform and the conveyor belts used to carry ammunition extending into the 10 storage districts. Spring Quarry was converted as a Ministry of Aircraft Production factory in 1943, primarily for the production of aircraft engines. Such operations entailed a huge influx of workers and above ground a military landscape developed, the prominent feature of which were the welfare facilities including dance halls, shops and dining areas. Nor did activity cease at the end of the war: in 1961 the factory was converted to the Central Government War Headquarters from which the Prime Minister and a nucleus of ministers and senior officials would conduct the survival and restoration phases of the Cold War. This vast nuclear bunker could accommodate 4,000 staff for 30 days, completely divorced from the outside world. Today, this bunker is symbolic of the mutual distrust that existed between East and West, housing an extensive assemblage of the artefacts required to communicate, govern the country and sustain life.

Sue Morecroft from the Council for British Archaeology continued this below-ground story with an account of her research on the St John's school air raid shelters at Redhill in Surrey (see *IA News 144*, pp 5-6). Whilst oral history suggests that occupants of the girls' shelter learned to knit during air alerts, the surviving wall art in the boys' shelter shows that the boys spent their time painting the flat shelter walls with panoramic murals of adventure stories such as Treasure Island, Robinson Crusoe and Beowulf. Archaeological survey of the wall art has provided an interpretation of the phasing of the murals, insight into the organisation and working methods of the painters, and an awareness of social relationships between the occupants of the shelter. A comparison of each mural with written texts has further suggested that the murals may have been the focus for didactic instruction relating to wartime protocols, safety measures and perhaps future expectations. Sue provided a fascinating insight into life underground for children in the Second World War. The murals have been conserved with aid of an HLF grant under the Local Heritage Initiative and some of the murals can be seen on the LHI website, [www.lhi.org.uk](http://www.lhi.org.uk).

Later in the day, we moved on to consider work on twentieth-century military heritage in a wider context. Historic Scotland has been taking a strong interest in this topic, and Talya Bagwell and Dr Elizabeth McCrone from their Scheduling and Listing Teams gave an illustrated account of the audit they are undertaking of Scotland's nineteenth and twentieth century military survivals. Since the coastline, for example, is not so developed as in England, there is remarkable survival of ephemeral structures like anti-tank blocks, coastal batteries and pill boxes. Their paper raised the perennial question when thinking about twentieth century structures which were not intended to survive: poor materials and hasty construction, combined with the devastating forces of coastal erosion, make



*The military badges cut on the chalk downs above the military camp and firing range at Fovant in Wiltshire during the Great War, seen here c.1918*



The ANZAC cemetery at the site of the large WW1 military camp at Codford on the edge of Salisbury Plain  
Photo: Peter Stanier

The future of Bletchley Park, the renowned WW2 code-breaking centre in Hertfordshire, is under discussion

these fascinating remains of Scotland's wartime history a major conservation problem.

Equally, Alan Johnson from English Heritage discussed the complexity of the Ministry of Defence historic estate in England, which includes 657 listed buildings which vary enormously in age and character from purpose-designed military structures such as barracks, armouries, dockyards and airfields to farmhouses, cottages and country houses. In addition there are 664 scheduled monuments which include standing structures such as fortifications as well as earthworks, ruins and buried remains. He pointed out that although many of the listed or scheduled buildings continue to make an operational contribution, some are redundant or in poor repair. Consequently, the architects and historic buildings inspectors of Government Historic Estates Unit (GHEU) of English Heritage are increasingly involved in advising on the rescue of buildings in this latter category. Some are classified as Buildings at Risk (BARs) and the MoD has more of these than any other government department. The increasingly specialised forms of modern military structures erected closer to the present day often pose bigger challenges for conservation, adaptation and re-use. Decisions about their future need to be based on a thorough understanding of their heritage value which can be summarised in a statement of significance. Some buildings and monuments merit recording and architectural investigation and this type of research can be used as the basis for a conservation management plan, setting out policies to guide future use. Alan therefore provided an insight into the problems of caring for such sites and buildings, a problem also faced by Historic Scotland.

Jeremy Lake described how English Heritage has also become involved in discussions over the future of Bletchley Park, which many AIA members visited from the Hatfield conference. This site has, since its secret history was announced to the public in 1979, gained global renown as a code-breaking centre where (as a result of the development of machinery to process and decrypt data) the world's first stored programme computer was developed. It is widely valued, but opinions have differed over its precise role and legends (not always accurate) have been formed out of its extraordinary role and remarkable

personalities. Public consultation, and the completion of a detailed survey of the buildings and their landscape setting, informed the final drafting of a Values paper and its incorporation into the master planning for the site and its development as both a museum and business park linked in to its wider area. This flexible approach has enabled the character, value and sensitivity to change of identified areas of the site to be made available on the point of need.

Jeremy made it clear, though, that it is not always plain sailing on this project and that many problems still remain to be resolved. The viable long-term conservation of such sites is heavily reliant on cooperation and joint-working between a wide variety of interests and disciplines. They can be some of the most challenging historic sites to conserve for future generations, and 'experts' need to develop new ways of informing debates at a local and national level. There is a broad range of values associated with historic places, which include an understanding of evident historic and architectural importance through to associated and less tangible values, such as their value to the community and their sense of place. Military sites represent or reflect shared values and meanings in a number of ways, each of which have an impact on the way that they are managed and presented to present and future generations.

Jon Lowe of CgMs then demonstrated how the role of archaeology has become increasingly important in the decision making process and in the securing of adequate records of military sites. As an archaeological contractor, he discussed how modern military sites pose new and interesting challenges and how contractors might contribute to an understanding of the material legacy and the role of such places. His paper was illumined by his experiences at some of the most fascinating sites presented in the course of the seminar, including the USAF/RAF Greenham Common base, the WWII Harris Lebus factory staff air raid shelter in Tottenham and the Maze Prison in Belfast. Many of the speakers had referred in the course of their papers to the emotions generated by working as an archaeologist on such sites which are now historic, and Jon's photographs brought this home to his audience. John Schofield described it as 'heritage that hurts'.

It was John Schofield, the Convenor of English Heritage's Military and Naval Strategy Group, who fronted the Modern Military Matters research agenda which was published by the CBA in 2005. As a prehistorian, John has always been interested in how the processes of change and creation shaped the landscape and generated new types of monument and material culture from which archaeologists try to interpret and understand the past. He has turned his attention to the contemporary past, the world which we ourselves shape and influence in our everyday lives. His views have been published in English Heritage's *Change and Creation: England's Landscape Character 1950-2000* and in *Images of Change: an Archaeology of England's Contemporary Landscape*, edited by Sefryn Penrose and published in 2007. In his presentation, John reviewed some of the work carried out by English Heritage on modern military matters but also asked whether it was indeed right to separate out modern military from modern 'everything else'? He pointed out that we lump diverse activities together for earlier periods because it makes more sense to consider them in this way, and because themes such as military, industrial and settlement etc are generally interconnected. In the modern period, he suggested, the connections are even more significant and arguably even more interesting: the connections between military and industrial activity is, of course, especially strong in the twentieth century, something highly relevant to the interests of AIA. He therefore suggested that perhaps we should not think just about military sites per se, but to work in a more holistic, multi-dimensional and cross-thematic framework which would include, of course, the values that different people place on these sites which have significant meanings and even memories for many of them.

I am very grateful to all our speakers who contributed to this seminar. Next year's seminar at Lincoln also hopes to bring different groups of people together, on this occasion not just industrial archaeologists but also those with interests in local history or family history who are contributing in some way to the study of our industrial past. If you have any ideas for this, then do please contact Richard Hartree via the Ironbridge Office as he will be convening next year's seminar.

## AIA Awards 2008

The number of awards now given annually by the Association for Industrial Archaeology has grown so much as a result of generous legacies and donations that we devoted half an afternoon at the Annual Conference in Wiltshire to hearing presentations from the winners about what they had done. The actual awards were presented later by Professor Angus Buchanan, the Society's President, at the Annual Dinner.

### The Peter Neaverson Award

This is a new award to honour the memory of Peter Neaverson, a long-standing Council member and joint Editor of *Industrial Archaeology Review* for nearly 20 years. It is given for outstanding scholarship in industrial archaeology. The first of these awards was made to last year's Rolt Memorial Lecturer, Dr Colin Rynne of the University of Cork, for his magnificent *Industrial Ireland 1750-1930: an Archaeology*. This well illustrated book strikes a nice balance between the two sides in the current debates about the future directions of industrial archaeology, setting the scene in the first chapter but then covering familiar topics such as animal, wind and water power, roads and bridges, textiles and so on.



Colin Rynne (Peter Neaverson Award)

### The Dorothea Award for Conservation

The 2008 Dorothea Award went to The Kew Bridge Steam Museum volunteers for the conservation and restoration of the 70-inch Bull Type Cornish engine, still on its original site. One of five original steam pumping engines situated at Kew Bridge Steam Museum, West London (the former Brentford pumping station), the engine was built by Harvey & Co. of Hayle between 1857 and 1859 and ran until the station was decommissioned in 1944. This type of engine was developed in Cornwall in the late eighteenth century by Edward Bull in direct competition with the conventional beam engines being produced by Boulton & Watt. Bull's design dispensed with the need for the massive cast iron beam & engine house which were typical of the conventional Watt beam engine. One of the major advantages of this configuration was that the Bull engines were cheaper to buy than beam engines as they were much more compact and easier to erect, needing considerably smaller engine

houses and requiring fewer metal castings. TV presenter Anna Ford performed the operation initiation ceremony on 12 May 2008 (see *IA News 146*, page 11). The award was accepted at the AIA conference by Nick Morgan secretary of the Bull Engine Restoration Committee



Nick Morgan (Dorothea Award for Conservation)

### Fieldwork and Recording Awards

The entries for the 2008 Fieldwork and Recording Awards were of an exceptionally high standard. The *Main Award* winner this year was Mike Williams (together with Lucy Jessop) from English Heritage who produced a detailed report on the Tone Works near Wellington Somerset (NBR 76469 ISSN 1749 8775). This was a cloth finishing and dye works which had belonged to Fox Brothers & Co. The report combines detailed recording of the buildings and machinery with surviving documentary evidence, demonstrating effectively how the site functioned and evolved over time. The site itself, located on the River Tone, comprises a large 'well-preserved complex of one and two-storeyed buildings, ponds and watercourses ranging, from the early nineteenth to the early twentieth century'. Most of the machinery for the dyeing and finishing processes remain in nearly working condition, and there is also good survival of the power systems. The excellent company records allowed EH to date accurately many of the features of the building and machinery.



Mike Williams (Main Fieldwork and Recording Award)

The *Initiative Award* went to Ron Martin of Sussex Industrial Society for Barlavington, West Sussex, Duncton Water Mill Report. This again is an excellent example of the recording of a complex site. Ron's superbly detailed drawings reveal the development of the site and give some insight into how it functioned, including an unusual sack hoist. This entry highlights the

important work local societies do by recording local sites, thus adding to the national data about of our industrial heritage.



Ron Martin (Initiative Award)

The *Student Winner* was Lee Gregory for his MA dissertation (University of Manchester) 'Under Slate Grey Victorian Sky'. This was an excellent piece of research which married excavation evidence with census data to create a picture of the Victorian Slums of Ancoats. Not only were the buildings examined but the also the community that inhabited them, a mixture of Irish and Italian immigrants, distributed amongst local people who were predominately employed in the textile trades. Gregory found that while the Irish predominately came to work in the textile trade, the Italians appear to colonise one street, Gun Street, and brought other trades to the area such as ice cream maker (9 in Gun Street in 1901!) biscuit maker (2) and Organ Grinder/Player (3). To these people the area was not a slum but their home.

The organiser for these awards, Dr Victoria Beauchamp, would like to throw open for debate amongst the membership the possibility of changing the titles of this group of awards. Increasingly, we are receiving for consideration excellent professionally produced reports such as this year's winner and we hope will continue. However, we also recognise that many of you may not be entering because you feel you cannot compete even though, as Ron Martin has shown, you are producing excellent pieces of fieldwork and recording of important local sites. Victoria would therefore like to propose we split the main award into:

- (a) Professional Archaeologist (someone who is paid for the work)
- (b) Local Industrial Archaeologist/Society Award (voluntary and not paid!)

and that we retain the Student Award to encourage the industrial archaeologists of the future.

Please send any comments to Victoria at [vbeauchamp@gmail.com](mailto:vbeauchamp@gmail.com) or send a letter to *IA News*. She would particularly value suggestions as to the title of the awards.

**VISIT THE AIA  
WEBSITE**

[www.industrial-archaeology.org.uk](http://www.industrial-archaeology.org.uk)

## Publication Awards

These received a lot of entries this year as a result of our new leaflet but please keep them coming.

The *Occasional Publications* went to Ken Redmore, Society for Lincolnshire History and Archaeology, for his *Ploughs, Chaff Cutters and Steam Engines*, a well illustrated account of various agricultural implement makers in Lincolnshire.



Ken Redmore (*Occasional Publications Award*)

The *Journals Award* was presented to Alan Brittan of the Leicester Industrial History Society for a memorial issue of their journal which commemorated two of their former members, Dick Thomson and Peter Neaverson. Peter had been the Editor of this journal for twenty years and Alan republished – with much better maps – some of the articles with which Peter had been involved over the years.



Alan Brittan (*Journals Award*)

The *Newsletters Award*, a category for which we had the largest number of entries, went once again to the Waterworks Museum, Hereford, for their *Waterworlds*, Autumn, 2007. This is produced on glossy paper which resulted in excellent reproduction of the many photographs it contained. This award was received by Derek Duffett on behalf of the Museum.



Derek Duffett (*Newsletter Award*)

## Essay Award

The aim of this award particularly is to encourage younger people to send in essays often written as part of their courses on industrial or post-medieval archaeology. This year's winner was Hilary Orange of University College, London, for her essay based on her PhD research on public perceptions and experiences of Cornish tin and copper mining landscape, entitled 'Industrial Archaeology: its place within the academic discipline, the public realm and the heritage industry'. We wish her every success in her future.



Hilary Orange (*Essay Award*)

You are all reminded that the deadline for the Fieldwork and Recording Awards, Publications Awards and Essay Award for 2009 is 31 March. The Peter Neaverson Award has an earlier deadline of 1 December 2008 to enable the judges to get hold of the nominated books or articles and read them! Entries for the Dorothea Award for Conservation can be received at any time.

Please send all entries to the AIA Liaison Officer, AIA Office, The Ironbridge Institute, Ironbridge Gorge Museum, Coalbrookdale, Telford, Shropshire TF8 7DX

*Victoria Beauchamp, David Lyne,  
Marilyn Palmer & Ian West*

**NOTE:** All photographs by Mark Sissons except for that of Mike Williams which was taken by Nick Morgan.

## THE AIA OFFICE HAS MOVED

The AIA Office is now located at Ironbridge. The contact details are: Anne Lowes, AIA Liaison Officer, The Ironbridge Institute, Ironbridge Gorge Museum, Coalbrookdale, Telford TF8 7DX. Telephone: 01325 359846, Email: aia-enquiries@contacts.bham.ac.uk.

## New members

The AIA welcomes the following new members:

M.A. Blackburn, Llanfairfechan  
P.J.J. Gibbons, Reading  
A. Lowes, Darlington  
A.T. Robb, Penzance  
Juan Manuel Cano Sanchiz, Cordoba  
Mr & Mrs D.P. Timmons, Thaxted  
Mr & Mrs J.F.G. Warren, Wellingborough

## Affiliated Societies Weekend at Ironbridge 4-5 April 2009: 'Conservation Planning for Collections'

We propose to offer a weekend to consider planning for long-term sustainability and maintenance of Societies' collections – everything from engines to archives. We hope to include topics relating to the following questions:

- How does your society look after its objects/archives?
- Who will succeed your maintenance team/person?
- SPAB Mills Section has a programme to train millwrighting apprentices; where is the equivalent for other kinds of sites?
- Can we put together a network of 'experts' who could be called on to help (not just 'professionals'). There must be a lot of expertise at a local level which someone in another region would be grateful to be able to contact. Or is there?
- How do you store your archives/paperwork? Is some/all of it in need of attention and better storage? What are you doing with all those photographs and slides?
- How can you secure the long-term future of your collection (and your site)?

In many areas we are getting to be two generations away from those who worked with and maintained engines and other machines. I went to a very good day meeting several years ago where succession planning for long-term maintenance had been thought about, and implemented: basically a form of apprenticeship within the museum. A volunteer was assigned to the person who currently maintained the machine, to learn and to keep a record of repairs and the quirks and peculiarities of its operation. How could this kind of approach be implemented in the long term? Is it a satisfactory way of doing things? What have been your experiences?

There are two references which relate to the conservation of collections of artefacts at sites and in museums in Kate Clark's book *Informed Conservation* (2001). On page 65, under 6.3 Management Plans: 'curatorial professions may also produce collections management plans', and on page 67 under Conservation Plans '[they] can be useful where ...the site has several different types of heritage and cultural assets (e.g. buildings, landscapes, collections, ecology).' Buildings, landscapes and ecology have all been targeted over the past few years – what about collections?

I am asking for potential speakers/participants who can share their knowledge and advice – what to do, and what *not* to do.

*Christine Ball, Affiliated Societies Officer  
c.ball@sheffield.ac.uk*

## Ashley Mill in Oldham

*IA News 146* contained an item in Roger Holden's North West England column which was of great personal interest, namely the closure of the Ashley Mill in Oldham. The mill featured greatly in our family life, since my mother, Lilian, was a weaver there. She started there, aged 12, as a half-timer in 1919. There was such a shortage of mill hands that although the school-leaving age had been raised to 14, those over 12 could work for half a day and attend school the other half, alternating mornings and afternoons on a weekly basis. Her first week's earning was a six penny piece, given to her by the lady who was teaching her. She took to it like a duck to water and by the time she was 16 she was looking after six looms. Four was the usual number.

The Ashley Mill was about 250 yards from her parental home. By the time she was in her early 20s she was the sample weaver, that is, the one who wove the show pieces by which the firm gained its orders. She married my father, Fred, a cotton mule spinner, in 1932, and was promptly sacked as it was company policy and the general practice of the industry not to employ married women. But, the depression had arrived. The firm needed all the orders it could get, and she was asked to come back by the owner, Benjamin Lees, son of the founder of the same name. I was born in 1936 and she stopped weaving.

The mill was known by most of us as 'Benny Lees' (work)shop'. There were 500 looms, you can imagine the racket. As kids we were allowed to look in the weaving shed and wave to family friends – of my mother's that is.

I was very happy to be allowed to give a Member's Contribution at last year's Conference. I spoke about my family and the district we lived in. We were 'all cotton': dad a spinner, mother a weaver, auntie a reeler, as was grandma; mother's father a foreman fitter at the great New Hartford Works, belonging to Platt Brothers; uncle worked there, also a fitter; paternal grandpa, who I never knew, worked in on of Platt's foundries.

Now, with the Ashley gone, an era ends. I will go back to visit my old district (Westwood) in Oldham, and I will pick up faint echoes of rattling weaving sheds and spinning mills as I look at the new houses.

P.S. the firm owning the Ashley at the end was Lees-Newsome, not 'Less'.

*Fred Brook  
Redburn, Bardon Mill, Northumberland*

## Industrial preservation in Canada – advice sought

I work for my city's Heritage Preservation Office in Peterborough, Ontario Canada. Peterborough has an extremely rich and diverse history with many museums, living history sites and other cultural landscapes making it a great place to live. The history of Peterborough is intrinsically related to the development of industry. From its beginnings in the 1820s lumber milling was the first major processing industry followed closely by grain

milling. Later in the 1850s the focus shifted to the manufacturing of saw mill machinery, agricultural tools and boat building. In last hundred years industry powerhouses such as Canadian General Electric and Quaker Oats became the base for Peterborough's modern industrial development. The Otonabee River was the important factor is all of this and still is a focal point of the city.

Our city's Heritage Preservation Office is very young, only 5 or 6 years old, but there has been a great movement of built heritage preservation here since the early 1970s. I have been granted time to research and write a policy/procedural type document to use as a template for dealing with historic/industrial sites and recording them in both the archaeological and heritage records. What I wish to ask from you at the Association for Industrial Archaeology, a known leader in the preservation of industrial sites, are some comments or recommendations for the processes of identifying and preserving the history and stories of these sites. Additionally a large part of this initiative will be placed on education and promoting awareness that needs to be first established to provide access to these cultural resources.

*Andrew Nichols, Heritage Researcher,  
Heritage Preservation Office,  
City of Peterborough, Ontario, Canada  
e-mail: ANichols@peterborough.ca*

## A unique valley?

Michael Nevell, in his article 'The Archaeology of Industrialisation and the Textile Industry', in *Industrial Archaeology Review* volume XXX.1 (p.46), claimed that 'The Kirklees Valley is unique in the region in being exclusively dominated by

the finishing trades throughout its industrial life. By the early 19th century there were 12 textile finishing sites along a 4km stretch of valley, of which six were founded in the late 18th century. The first of these sites established was the Woodhill Bleach and Dye Works opened in 1786, whilst the last working site was the Kirklees Bleach Works which closed in the 1960's'.

Much of this statement is incorrect. Seven of the 12 mills did not originate as finishing sites. Woodhill Bleach & Dye Works was not established until 1857, reusing a Woolen Mill erected in 1806; Kirklees Mill was built as a cotton spinning mill in 1791, and was listed in the Crompton census of 1811; Tottington Mill was grinding corn in the 18th century and spinning cotton until 1821; and Woolfold Bleach Works was converted to a paper mill in 1860. Furthermore, Brookhouse Mill, Croston Clough Mill, Ferns Cotton Mill, and Bottoms Mill were all built for spinning cotton, and none of these became finishing sites. Hardly a unique valley, then.

Anyone wishing to enlighten themselves regarding the origins and nature of textile manufacture in the Pennine uplands should acquire a copy of the excellent pioneering work by A.V. Sandiford & T.E. Ashworth *The Forgotten Valley*, published in 1981, by the Bury Local History Society ([www.burylhs.org.uk](http://www.burylhs.org.uk)). Frequently overlooked by later researchers, this is a thoroughly well-researched and well-illustrated booklet, and can still be used as a field guide to the industrial archaeology of the fascinating Cheesden Valley, to the north of Manchester.

*Mark Fletcher  
Matrix Archaeology Ltd, Kenwood House,  
Kenwood Road, Stretford, Manchester M32 8PT*

## AIA VISIT TO ROMANIA APRIL 2009

The mountain area of Banat, an important former industrial region in north-eastern Romania, is the main objective in this 4 to 5 day visit being arranged for us by Irina Iamandescu from Romanian Association for Industrial Archaeology. Among the sites are a series of 22 preserved and operational horizontal water mills and associated timber dams, some still grinding grain, an extraordinary site of exceptional value considered worthy of international recognition; a spectacular mountain railway serving an important former coal mine with a huge early twentieth century steam winding engine manufactured in Budapest, and a working hydroelectric system of canals, power stations and a narrow gauge railway. The plan is to assemble in Bucharest on 20 April before travelling by train to Timisoara, the main city of Banat, for excursions in the area and eventual return by coach to Bucharest.

See the insert with this mailing for further details.



*One of a series of 22 horizontal water mills, Rudaria Valley*



*Hydroelectric power station, Grebla*

## Robin and her rivets

In June the SS *Robin* resembled a Thames upriver 'flatiron' collier; her funnel, masts and ventilators having been removed to reduce her air draught ready for the move to Lowestoft and repair. To get Robin out from her old berth at West India Quay, London, and to a place where a sea going tug could be employed was relatively difficult, numerous bridges both fixed and movable had to be negotiated. On 14 June 2008 a pair of launch-type dock tugs together with some small supporting craft accomplished the first part of the journey. This was beset with some difficulty but in a few hours *Robin* was safely reberthed about half a mile to the southeast in South Dock, near the entrance lock, where she waited for two weeks.

On Saturday 28 June 2008 the sea-going tug *Napia*, 900hp, propelled *Robin* stern first downriver and out into the Thames Estuary in the manner of a dumb barge. From here *Robin* was towed bow first in a conventional manner. Fortunately the weather remained fair and *Robin's* hull surprisingly watertight. The next morning *Robin* arrived to a good welcome in Lowestoft. She was later put on a slipway at Small's Yard, in itself not that straightforward as *Robin* was too long for the cradle and extra support had to be devised for the stern. Out of the water *Robin* now looks superb.

Now in Lowestoft there has been a dilemma as to how the work on *Robin* is to be carried out. Should the new work be rivetted or welded? Rivetting is still done in places abroad. Apparently there are plenty of rivetters in Norway. In Germany replacement steel girders for historic bridges are still constructed traditionally using rivets, and closer to home Dorothea Restoration has carried out this kind of work.

The paddle steamer *Medway Queen* is if anything in a worse state than *Robin* and it is likely that the vessel will be virtually rebuilt. A completely new rivetted ship should emerge. We might compare this situation with the extensive refurbishment of PS *Waverley* (see *IA News 128* pages 2 & 3). Having a new coastal paddle steamer capable of carrying passengers for many years to come is an attractive proposition if funds can be found.

*Robin* is in need of a berth. She is likely to remain in Lowestoft until after Crossrail's work in London has commenced. The east end of the West India Import Dock will then be impassable for a number of years so she can't go back to her old berth at the west end of the Dock near the Museum in Docklands. Trinity Buoy Wharf at the mouth of Bow Creek in London would be unsuitable as ships there have to sit on the mud at low water. *VIC 56* used to be kept here and although this small ship, an enlarged version of a Clyde puffer, was better suited to this treatment than *Robin* would be, it was not good for the *VIC*. She moved to a better location at Chatham in Autumn 2005.

*Robin* presently looks very exciting out of the water and her fine lines can now be better appreciated. For some it seems a pity to put her back in the water and hide much of that beautiful hull. However if *Robin* is to remain in the dry she would need to be very well supported and in any case it is not good for a ship to remain like this indefinitely.

The steam drifter *Lydia Eva* (see *IA News 126* page 15) has recently had extensive repairs with a considerable proportion of her hull plates being replaced. This was done by welding, imitation rivet heads being welded on to give a more authentic appearance. However imitation rivet heads can look dreadful on a ship's hull – obviously fake. The steel ship's boat currently on board SS *Great Britain* in Bristol is a good example of this. There are too many rivet heads close together, clearly not doing anything as there are no overlapping plates. It has been hoped if possible to avoid this with *Robin*.

Extensive advice has been sought and the consensus is that rivetting is definitely better than welding – the plates are pulled tightly together when a red-hot rivet cools. However, rivetting skills are scarce and large numbers of rivets would be required. Traditionally the rivetting of ships hulls was done by a gang of men who could work quickly, something like bricklayers used to. In the UK there are not people with these skills. The current technology is welding and there are many workers with good skills and it is reliable. There are also appropriate surveyors experienced in approving this work and

obtaining insurance certification.

Rivetting is still carried out for traditional steam boilers but here the number of rivets is relatively small compared with that for a ships hull where thousands rather than about a hundred may be required. Priors at Yarmouth (see *IA News 128* page 3) did do some rivetting on PS *Waverley* and they are proud of their work but at most this involved just a few hundred rivets. With large numbers of rivets there are problems with health and safety legislation, drafted to cover cold rivetting with a power hammer. Rivetters doing this work can suffer from 'white knuckle syndrome' if they do too much and the number of rivets a man can do in this way is restricted by law. For SS *Robin* we are considering hot rivetting for which the rivet is soft and vibrational health hazards considerably less. However the health and safety rules cover all rivetting whether hot or cold.

If extensive welding has to be done on SS *Robin* we have a classic dilemma. We will be replacing a historic artefact at least in parts with a modern pastiche in order that the whole exhibit can survive, and in the recent past there has been much agonising over the ethics of this situation, e.g. by the major National Museums. Advice is that if parts of *Robin* are to be replaced some good samples of the original work should be kept for display in order to illustrate late nineteenth century rivetting techniques.

Instead of rivetting, tension controlled bolts (TCB) can be substituted which look the same on the outside but these are probably less than ideal for a ship's hull. One might also consider a more up-to-date way of carrying out the work by using a rivetting machine to avoid the white-knuckle problem. The machine might be computer controlled with the holes in the plates and frames flame cut. This could easily achieve very great precision and a really excellent result, unobtainable by hand. In any case it is desirable that the holes be flame cut or drilled, the old method of punching holes introduces stress and the finished structure is consequently weaker.

The traditional hydraulic rivetting machine usually has a G-clamp shape. It has to be suspended over the work and can't reach everywhere on a ship. Some hand



The stern of SS *Robin* on the slip at Lowestoft, July 2008

Photo: R J M Carr

rivetting is always necessary and there can be especially awkward places. In a gang of men the chief rivetter was often the one who could do it left-handed over his head. With skills like this, such a person could command high wages.

In mid August a television crew visited *Robin* on the slipway in Lowestoft and recorded rivetting in progress. Some of this footage should appear in the BBC TV programme 'Coast'. Passengers travelling by train in and out of Lowestoft railway station get an excellent view of *Robin* close to the track to the south. It is hoped to report further on the progress of the work.

Robert Carr

## Goonvean Engine going home?

At one time the dismantling, transportation and re-erection of Cornish beam engines was a common activity in their home county. Not so today, but those fortunate enough to be at the Goonvean china clay pit near St. Austell in early September were able to witness such a rare event.

The 50-inch beam engine at Goonvean was one of only two remaining in the china clay country. It was built by Harvey of Hayle in 1863 for the Penhalls Mine, near St. Agnes. In 1885 it moved to the nearby Trevaunance Mine and in 1902 moved again to Gooninnis, still in the St. Agnes area. In 1910 it came to Goonvean, and the date is incised over the cylinder doorway of the engine house. The transfer of

engines from Cornish mines to china clay pits was a common occurrence at this time. In 1928 the original beam of the engine was found to have cracked. Holman Brothers of Camborne cast a new beam, which this was certainly the last beam ever made in Cornwall and probably in the world. At the same time the cylinder was re-bored. The engine pumped at the Goonvean pit until 1956.

For some time the Goonvean & Rostowrack China Clay Co. has been seeking to remove the engine and demolish its house and ancillary buildings. This is to enable clay to be extracted from the site. Because both engine and engine house were listed Grade II\*, some complex negotiations had to take place to facilitate this. The building, on the edge of the pit had become unstable and, exceptionally, English Heritage did not object to its demolition and the relocation of the engine. Agreement having been reached, plans were made by a team from Kew Bridge to dismantle the engine. It would then be moved to Hayle, where it was built, and re-erected by the Harvey's Foundry Trust.

The engine was thought to be in a relatively poor state. It had been idle since 1956 and there was a period in the late 1980s when the engine house had no roof and the plug door was missing, allowing water ingress. The team from Kew Bridge was consequently surprised how easily the various pieces came apart. The most difficult activity was to remove the outdoor nose pin supporting the pump rod. Heat treatment and hydraulic pullers were needed 85 feet up on a cherry picker!

As dismantling progressed the engine revealed another secret. The cladding of the valve chest had clearly been renewed at some time, as it bore the name of Sara's Foundry, Camborne. This may have been part of the 1928 rebuild. The engine was also fitted with a 'St. Austell Governor', a locally devised mechanism to ensure the engine maintained a regular stroke.

On 2 September the Kew team removed the top part of the engine and the remaining pump rods attached to the beam. The next day contractors took the roof off the engine house. Seven days later, before an invited audience, the beam was lifted from its bearings and swung to the ground. Contemporary accounts quote the weight of the Holman beam at 20 tons and the crane weighed it at 19 ¾ tons. On 19 September the 50-inch cylinder, exhaust pipe, steam pipe and remaining timbers were lifted out. All items were then labelled and packed into a container pending transfer to Hayle.

The engine will eventually be re-erected at Hayle, where the Harvey's Foundry Trust, ING and The Prince's Regeneration Trust have formed a partnership to do this. They intend to restore the engine to working order and install it in a new building on the Old Gasworks Site with full public access. When the house at Goonvean is demolished, the 1910 incised keystone and some coins will be preserved with the engine in Hayle.

Now only one Cornish engine remains in the clay country, where once there were dozens. The 50-inch engine at Parkandillack, built by Harvey's rivals at Copperhouse Foundry in Hayle, is preserved in situ

by English China Clays. It runs on compressed air and is run on occasional Open Days. Other engines from the clay are the 30-inch engine from Greensplat at Wendron Forge and the 22-inch rotary from Rostowrack in pieces at King Edward Mine, while the Science Museum owns a 40-inch Harvey engine from Carpalla pit, stored in a dismantled state.

My thanks to Kingsley Rickard of the Trevithick Society for additional information and photographs.

*Graham Thorne*

## The Red List – England's industrial heritage at risk

English Heritage published its Heritage at Risk Register in July 2008, extending the previous Buildings at Risk surveys to include Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields and Protected Wreck Sites. Clearly there are significant advantages in bringing together all the sites of historic or other significance into one volume. The Register has 1,680 entries, varying from buildings in a state of collapse with no moves toward a restoration scheme, to others where restoration is already well under way and the future seems assured. While in most cases the problems are caused by neglect and decay, in some cases the threat may be land or coast erosion. For most of England only Scheduled Monuments and buildings listed Grade 1 or 2\* are included, but in London coverage extends to all Grade 2 buildings.

It should be of interest to AIA members that I have compiled a list from 212 sites found on the register deemed to be of industrial archaeological interest and therefore of concern to us all. This can be viewed on the AIA's website: [www.industrial-archaeology.org.uk](http://www.industrial-archaeology.org.uk). The properties are grouped, as in the original publication, by region and local planning authority. The full register can be viewed on the English Heritage website: [www.english-heritage.org.uk](http://www.english-heritage.org.uk). Within it, go to Heritage at Risk and the appropriate region.

The condition of each structure is graded as: Very Bad, Poor, Fair and Good. The level of risk is assessed on a scale of A to F, with 'A' at risk of rapid decay or collapse with no plan

or scheme for restoration agreed, and 'F' schemes of restoration or adaption already under way, with final use identified. With exceptions for what seem to me to be particularly significant sites, I have only included properties assessed A, B (rapid deterioration likely, solution agreed but not implemented) and C (slow decay, no solution agreed) or where the condition is Very Bad. Otherwise I have selected those properties most likely to be significant to the study of the industrial period, with the exception of specialist industrial buildings earlier than about 1700. Bridges are only included if they are of technical interest. Also included are specialised workers' housing, and buildings built to service the new farming methods of the eighteenth and early nineteenth centuries. Buildings associated with large country houses and estates are only included if they used new building materials such as iron or concrete, housed industries or provided services such as water, gas or electricity supply. Fortifications are only included if their construction used new building materials.

Remember that the AIA cannot possibly write to the relevant authorities about all these sites, and it is up to individuals in each area to take action, rally support and make a case for the rescue and preservation of sites they believe to be important. In many areas the local planning authorities maintain a Buildings at Risk register, which will include Grade 2 buildings not covered in this national survey, and for those concerned about a particular area enquiries to the planning authority are the first step. There is no clear rural/urban pattern of authorities which do maintain a register. Most important, perhaps, is the fact that many planning authorities and listing inspectors have been very reluctant and, despite recent changes in guidance, remain reluctant to list any post-1800 buildings unless they are considered to be of architectural merit, with the occasional exception of structures associated with well known and significant engineers or innovators. Certainly, there are many structures of great industrial archaeological significance which are unlisted and only local awareness and action can do anything to ensure their survival or at the very least make a proper record.

*David Alderton*



*Lifting out the massive beam at Goonvean pit*

*Photo: Kingsley Rickard*

## Lancashire textile mills assessment survey

During the 1980s, county-wide surveys of textile mills in West Yorkshire, Greater Manchester, and East Cheshire were supported by the former Royal Commission on the Historical Monuments of England (RCHME). The principal aim of these surveys was to produce as full a record as possible of the buildings of the textile industry, and to examine their importance in the architectural heritage of the region. The surveys also created a reliable information base to provide consistent information on all the extant mills, which could be used by the District Planning Authorities when assessing applications for new developments. For several reasons, however, historic textile-manufacturing sites in Lancashire were not subject to a survey at that time and, consequently, an adequate information base that can be consulted to assess development proposals and their impact on the surviving industrial heritage is presently lacking; there are thought to be between 2,000 and 2,500 textile-manufacturing sites in Lancashire, although there are only approximately 1,000 recorded on the county Historic Environment Record (HER).

The twenty-first century has brought increasing pressures for the redevelopment of mills and associated historic industrial sites, not least through the government's Urban Task Force, which has

highlighted regeneration of urban areas and the 'recycling' of existing land and buildings with the development of 'brownfield' sites. Moreover, the continuing decline of traditional manufacturing industry has led to economic diversification and the continuing loss of former textile mills.

In response to the current threat to the county's rich industrial heritage, the Lancashire Textile Mills Assessment Survey has been initiated by Lancashire County Council, in partnership with English Heritage, who has provided the funding. The principal aim is to develop a database of the state of textile-manufacturing sites in Lancashire, based on cartographic information and other primary sources. Textile-manufacturing sites are taken to comprise the preparation, spinning, weaving and finishing of organic textiles, including cotton, wool, silk, fustian, and jute, and man-made fabrics, such as oilcloth and rayon. Ancillary works that were demonstrably part of the textile industry, such as finishing works, iron foundries, and engineering works that produced textile machinery, are also to be included.

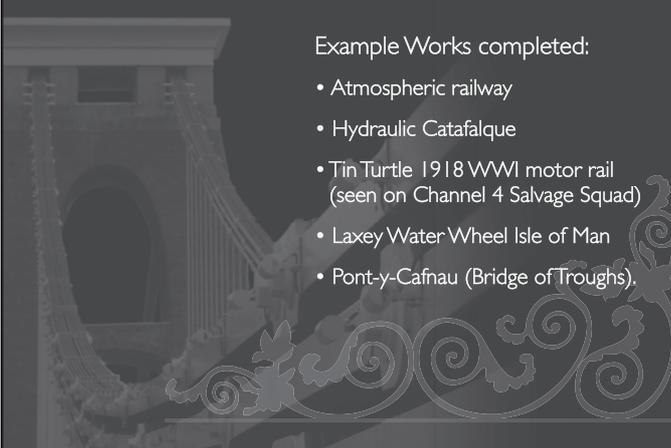
The specific objectives of the project are to identify from primary sources all the textile-manufacturing sites in Lancashire, review the existing baseline data on such sites held in the Lancashire

## DOROTHEA RESTORATIONS

Dedicated to conserving Britain's heritage

Dorothea Restorations has built a reputation for delivering traditional and specialist engineering services to those who are looking after our industrial heritage.

Customers range from engineering enthusiasts to National Museums



Example Works completed:

- Atmospheric railway
- Hydraulic Catafalque
- Tin Turtle 1918 WWI motor rail (seen on Channel 4 Salvage Squad)
- Laxey Water Wheel Isle of Man
- Pont-y-Cafnau (Bridge of Troughs)

Whaley Bridge Office Tel: 01663 733544 Fax: 01663 734521  
 Bristol Office Tel: 0117 941 5010 Fax: 0117 955 9661  
 Email: [sales@dorothearestorations.com](mailto:sales@dorothearestorations.com)  
 Web: [www.dorothearestorations.co.uk](http://www.dorothearestorations.co.uk)



HER, develop an initial database that is coupled to a geographic information system (GIS), produce a desk-based survey, and update the Lancashire HER. It is intended that the results will also be used for determining more precisely what further stages of field assessment will need to be developed to safeguard the remains of the county's internationally significant industrial heritage.

The assessment survey is being carried out on behalf of Lancashire County Council by Oxford Archaeology North, and the process of data gathering is now firmly underway. Further information on the project can be obtained from the Project Manager, Ian Miller, at [Oxford Archaeology North \(i.miller@oxfordarch.co.uk\)](mailto:i.miller@oxfordarch.co.uk).

*Ian Miller*

### Is IMATT for you?

A major survey carried out in late 2005 made clear the precarious state of traditional skills across the sector. The message was that something needed to be done now to stop these vital skills dying out

completely. The Industrial, Maritime, Aviation and Transport Technologies (IMATT) Training Scheme is administered and co-ordinated by Hampshire County Council Museums and Archives Service. The Heritage Lottery Fund has awarded £360,500 to provide bursaries in heritage skills training over a four-year period. Aimed specifically at restoration and conservation practitioners in the industrial and transport heritage sector, these bursaries offer applicants the chance to enhance their skills and experience.

The scheme is open equally to volunteers and paid staff. It is based on a national network of training centres at established heritage institutions that can offer specialist training. The very wide range of skills being offered include practical 'on the bench' training and practical operational skills in the maintenance and operation of machinery/transport. Apart from the main areas of practical training in all the transport disciplines the scheme can offer specialist training in the maintenance and operation of



*Talbot Mill, Chorley, was the largest integrated spinning and weaving mill in Lancashire when built in 1906/7. The mill was demolished in 2002 Photo: © Crown copyright. NMR*

industrial machinery including textile, printing and early machine tools.

Applicants might be a conservator with some Industrial Collections experience, looking to add more practical skills to their portfolio and to developing new skills towards full PACR accreditation; a postgraduate looking to enter the Industrial Conservation sector and seeking practical skills from a placement; a professional working in related skills looking for a career change; a Museum Technician with Industrial Collections experience looking to add more practical skills to their portfolio and possibly working towards conservator status; an industrial heritage site, preserved railway or transport museum employee looking to gain further experience in the operation and care of their collections; a volunteer working within a railway/transport society or industrial heritage institution, looking to add further skills and undertake increased responsibility for the maintenance and operation of the collections in their care; or a 3rd or 4th year apprentice working within a museum, industrial heritage institution, transport society or a commercial heritage engineering company, who would be looking for opportunities to broaden their understanding and practical skills base in addition to their formal training programme.

If you work in the transport and industrial heritage sector in a paid or volunteer role and think a Heritage Lottery Funded Training Bursary could help you, visit the website: [www3.hants.gov.uk/museum/imatt.htm](http://www3.hants.gov.uk/museum/imatt.htm) for full details of the project. Applications should be made to: The Training Manager, HLF Skills Training Bursary Scheme (IMATT), Hampshire County Council Museums and Archives Service, Chilcomb House, Chilcomb Lane, Winchester, SO23 8RD.

### Spike receives Conservation Award

The 2008 Conservation Award of the Surrey Industrial History Group was presented to the Charlottetown Jubilee Trust on 12 July for the restoration of 'The Spike', the former Casual Ward of the Guildford Union Workhouse. The award was commemorated by the presentation

of a plaque to Mr John Redpath (Chairman, Charlottetown Jubilee Trust) by Mr Robert Bryson (Chairman, SIHG). This is the 26th annual conservation award made by the SIHG.

'The Spike' was the colloquial name given to all the casual wards for vagrants attached to the many workhouses established throughout the country under the Poor Law Reform Act of 1834. This one was attached to the Guildford Union Workhouse and is a rare survival. It was built in 1906. After the workhouse site was taken over by St Luke's Hospital it was used for the storage of medical records, to which it probably owes its survival. The work involved the restoration of many of the cells and other facilities used by the vagrants, both for those with some money and those who had to earn their night's lodging by breaking stones, wood-cutting or oakum-picking. The remainder of the building has been converted for community use, with meeting and education rooms, and a day-nursery. It was formally opened in January 2008. The work was supported by the Heritage Lottery Fund, Surrey County Council and Guildford Borough Council. For further information visit the website at [www.charlottetown.co.uk](http://www.charlottetown.co.uk).

### Americans honour British engine of 1841

On 2 July 2008 the American Society of Mechanical Engineers held a ceremony to designate the Penn oscillating engine in the paddle steamer *Diesbar* as a 'Historical Mechanical Engineering Landmark'.



The 1841 Penn oscillating engine in the paddle steamer *Diesbar* is now a 'Historical Mechanical Engineering Landmark'  
Photo: Richard Hartree

This engine has been in service in steamers on the Elbe since 1841 when it was installed in the *Bohemia*. Penn's design of oscillating engine with the valve chest removed from the central trunnions became the 'standard' concept for all other makers and enabled the oscillating engine to become favoured for paddle steamers until the arrival of the compound engine. The cylinders are 24½ x 27 in, the pressure 36psi and the max power 110hp. The crankshaft was replaced in 1853 (with a 10 year guarantee), one cylinder was replaced in 1870 and both in 2002. Its more than 160 years of service is truly remarkable.

Richard Hartree

### Tinsley Towers toppled

Sheffield's Tinsley cooling towers were blown up at 3am on Sunday 24 August, watched by a large crowd assembled at the nearby Meadowhall Shopping Centre. The two 76m (250ft) towers remained from a group of seven after the Blackburn Meadows electricity generating station was demolished in the 1970s. The landmarks next to the M1 were called the 'Gateway to Yorkshire' by passing motorists. Despite a petition to save them, they were found to be structurally unsafe. The owner E.on is to develop a biomass power station on the site.

### Smoking stacks

'Mine and Yours', a week of events celebrating Cornwall's past, included the lighting of 21 mine chimney fires using straw and hay near Camborne at the end of June.

Thousands turned out to watch the spectacle which re-created the skyline smoking engine house chimneys of the nineteenth century.

### Medieval canals discovered

Martin Redding of the Witham Valley Archaeology Research Committee, has used aerial photographs to discover a network of almost 60 miles of medieval canals in the Lincolnshire Fens. Now completely silted-up, they may have been built by monks for transporting stone.

### Contacting Hereford waterworks

Please note that the telephone number for contacting the Waterworks Museum at Hereford (reported in *IA News 146*, page 7) should be 01600 890118.

### International Molinology

The International Molinology Society (TIMS) fosters worldwide interest and understanding of wind, water, human and animal powered mills, as well as encouraging research and promoting the restoration of mills. Every four years an International Symposium is held in one of the member countries. The latest edition of the journal *International Molinology*, No.76, July 2008, includes articles on early American flour mills, windmill washers of the Pacific (ingenious wind-powered washing machines built by American servicemen in wartime Pacific), mills in Slovenia, the water-powered Orton Bradley sawmill in New Zealand, mills on South African stamps, and many shorter items. It is available at £6.50 incl. p&p from the editor, Tony Bonson, TIMS, 14 Falmouth Road, Congleton, Cheshire CW12 3BH. Details of membership of TIMS can be found on the website: [www.timsmills.info](http://www.timsmills.info).

**ADVERTISE  
IN IA NEWS**

Contact the editor  
(see panel on back page)

South West England

Probably the most significant news this year was the acquisition by the National Trust of Wheal Trewavas as reported in *IA News 146*. Conservation work on the site is likely to run through to at least autumn 2009. September 2008 also saw the remarkable activity to rescue the 1863 Harvey beam engine from Goonvean clay pit, reported elsewhere in this issue.

On the debit side there has been vandalism on Cornish sites with many thousands of pounds worth of damage at Geevor Mine and major problems at Cornwall's first geological reserve, St. Erth Pits, near Hayle. Formerly known as Harvey's Pit, and in the care of Cornwall Wildlife Trust since 1986, the site was worked for clay and sand from the 1830s. The clay was used by, among others, legendary potter Bernard Leach, and the sand was used at Harvey's Hayle Foundry for moulding. BMX and mountain bike riders have damaged trees and quarry faces, and torn down walkways.

Other losses include the 'Old Holman Shed' an early prefabricated building erected at Dolcoath Mine in the 1890s to house Californian Stamps. In the 1940s it was moved to Pool and used to make parts for Bailey Bridges and Mulberry Harbours. Ownership had passed via Holman Brothers and South Crofty to Kerrier District Council, who decided to demolish it. Despite the fact that its pitch pine frame and galvanised iron cladding made dismantling and reassembly feasible, the council decided in September 2007 to scrap it but announced triumphantly that the timber would be reused at its proposed Robinson's Shaft heritage site. This seemed only slightly better than burning the building and

saving the ashes. A more recent structure to disappear was the remaining headgear at Mount Wellington Mine, near Truro. Unused since 1992 it was finally demolished in November 2007.

A number of redevelopment projects, affecting industrial sites in Cornwall, secured planning consents during the year. These included the Heartlands Project at Pool, based around the former Robinson's Shaft of South Crofty (awarded £22 million of Lottery funding), the former Holman Brothers No. 3 Rock Drill Works in Camborne and the Perran Foundry site at Perranarworthal. It remains to be seen how the current financial crisis will impact on such projects. Baseresult continued with their plans to reopen South Crofty mine, having formed a new company, Western United Mines, for the purpose and secured £50 million in funding in late 2007.

Autumn 2008 saw completion of the £3.8 million project to conserve some 20 listed buildings on the Geevor site; the opening of 'Hard Rock', Geevor's new mining museum was scheduled for October and the mine also announced its intention to open up more of the shallow levels at Wheal Mexico to visitors. Geevor also shared with Porthcurno Telegraph and two other museums a £1 million package secured by the Universities of Exeter and Falmouth in August. The funds will be used to update physical displays and create web-based exhibitions.

The last beam engine to work commercially in Cornwall, the 30-inch Greensplat engine, which has been at Wendron Forge since 1974, has been completely refurbished and is now pumping water from a flooded shaft.



Mount Wellington Mine began tin production in 1976

Photo: Peter Stanier

Cast Iron Restoration

Cast Iron Welding Services, 3 generations of cast iron welding experience.

Conservation and restoration of historic/heritage monuments, bridges, architectural iron work, fountains, rain water hoppers with cracks and corrosion that require preservation are restored with a unique pre-heat and fusion welding process which matches the damaged base material. Intricate detail is restored to its original condition. Cracked vintage engine blocks and cylinder heads are also restored without expensive pattern and re-manufacturing costs. We have a fully fitted machine shop for all machining requirements.

Project management consultation and quotations.



Chimney top repair. (See picture top right)



Sluice gate repair.



Bridge repair. (Photo courtesy of London City Council)

Samson Road, Hermitage Industrial Estate, Coalville, Leicestershire LE67 3FP

Tel: 01530 811308

Email: sales@castironwelding.co.uk

Web: www.castironwelding.co.uk

cast iron welding services ltd.

Cornwall County Council continues work on the Mineral Tramways Project with new links planned including one from Carn Marth to Twelveheads via Carharrack and Wheal Maid following part of the former Redruth and Chasewater Railway.

The wider influence of Cornwall and its people continues to be recognised. In September 2007 a Cornish contingent attended the opening of the Allihies Copper Mine Museum in West Cork by Ireland's President. The museum is housed in an 1845 chapel built by Cornish miners. Many Cornish captains and miners worked at Allihies between 1812 and 1884. One John Richards Reed was manager there for 30 years and there is a spectacular engine house built for an engine installed by Michael Loam & Son in 1862. Early in 2008 formal twinning links were set up with Mexico, Camborne being linked to Pachuca and Redruth to Real del Monte. The Cornish Mining World Heritage Site Office at Cornwall County Council is exploring the extension of the site to Cornish Mining sites abroad. Sites under consideration are New

Zealand, Australia, South Africa, Spain, Ireland and Mexico.

Spring gales in March destroyed the sea lock gates of the historic Bude Canal, with the cost of repairs put at £250,000. The aim was to complete repairs in May, combined with a dredging project originally planned for the autumn. The Bude gates are the only ones in the country to open directly into the Atlantic. In July the celebrated West Country schooner *Kathleen & May* docked at Penzance from Brest with a cargo of 30,000 bottles of Languedoc wine en route to Dublin. She was under charter to the French Compagnie de Transport Maritime a la Voile.

In Devon, early 2008 saw the disappearance of a major feature on Plymouth's waterfront when the grain silo dating from 1942 at the city's Millbay Docks was demolished. Designed by noted structural engineer Oscar Faber, and memorably characterised by Pevsner as 'a secularised Albi Cathedral', it was built to enable wartime grain cargoes from North America to make the earliest possible landfall, but had been disused for many years. It is alleged to have survived for many

years due to its acting as a 'windbreak' for docking Brittany Ferries. Its dense and heavily reinforced structure and poor site access made re-use impractical. The site will be a lorry park. One of Plymouth's oldest industrial sites, the medieval Blackfriars Gin Distillery on the Barbican, was damaged by fire in March. Members will, I am sure, be relieved to hear that the fire was confined to an upstairs kitchen and production was unaffected.

On a brighter note, a combination of intense local and national campaigning saw the listing of the surviving Brunel atmospheric pumping station at Totnes as a first step towards ensuring its survival and re-use.

In 2007 archaeological activity at Morwellham Quay uncovered the 1858 tunnel of the Devon Great Consols Railway and this was due to be consolidated this summer. Other work included excavation of the upper deck and well of an eighteenth-century limekiln; this would uncover a quantity of nineteenth-century domestic rubbish from the neighbouring Ship Inn. For the coming winter plans include reinstatement of the overhead railway on the Great Dock ore floors, and further excavations at the Limestone and Lower Copper Quays. There are plans to link Morwellham with the Devon Great Consols site by a multi-use trail and a tunnel beneath the A390 at Gulworthy. Mining in Devon may see a revival. Wolf Minerals, an Australian company, have announced their intention to reopen the Hemerdon wolfram mine, near Plymouth, with work starting in 2010.

Finally I am conscious that Cornish news is somewhat preponderant in this report. I should very much welcome more reports from Devon, particularly the north and east of the county.

Graham Thorne

### South East England

The year 2008 saw the 100th anniversary of the flight at Farnborough on 16 October 1908 of British Army Aircraft No.1A, piloted by Samuel Franklin Cody. That this was the first demonstration in Britain of controlled, powered flight is now generally accepted. The rival claim of A.V. Roe's aircraft, which may have lifted off the ground in June 1908, can be held invalid because it could not have been a demonstration of

controlled flight, as the aircraft, having no fin or rudder and an openwork fuselage, would have been uncontrollable in yaw.

A non-flying replica of Cody's aircraft and its engine has been constructed by the Farnborough Air Sciences Trust, involving a project team of over 40 people. It was displayed at the Farnborough Air Show in July, and will be installed permanently adjacent to the FAST Museum at Trenchard House at Farnborough. This is in itself an historic site as it was the headquarters of the RE Balloon School, and from August 1914 of the Royal Flying Corps. A replica of A.V. Roe's aircraft has also been constructed, again by a substantial project team, at the Brooklands Museum. This is intended to be flown, and was shown taxiing at the celebration of its 100th anniversary at Brooklands in June.

In Hampshire, calamity struck the project to restore the motor launch *Medusa* (HDML 1387) when the workshop building at Hythe, Southampton, caught fire in October 2007. The three engines within were badly damaged, one beyond repair, and aluminium and brass components melted. Many internal fittings for the boat were destroyed, as were furniture, tools and woodworking machinery. Fortunately *Medusa* itself was not affected and the two damaged engines are being rebuilt. It is still hoped to complete the restoration project in 2008. A project by the British Military Powerboat Trust to restore the FMB *Ark Royal* was also affected, in that an engine and gearbox were damaged, although the boat itself was unharmed.

Meanwhile, the PS *Monarch* steamed from its former home in Kent to the Isle of Wight, where it began operating on the River Medina in the spring of 2008. At 42ft, the vessel is thought to be the smallest commercially-operated paddle steamer in the world.

In Sussex, a notable event in the restoration programme of the Wey and Arun Canal was the breakthrough on 2 June of the tunnel under the B2133 road at Loxwood. The hump-backed bridge at this site was removed after the canal closed. To replace it with a level bridge required the canal bed to be lowered and a new lock constructed beyond the bridge to return it to its original level. This lock was completed in May 2007.

Construction of the new bridge/tunnel under the road began in January 2008 and is now well advanced. It is constructed of reinforced concrete and is costing £1.5m, raised by the Trust's own efforts.

The Volks Electric Railway Association has rescued the original dynamo which provided power for Volks Electric Railway at Brighton in 1883. It was, with other historic machines, in imminent danger of being scrapped by the Electrical Engineering Department of Brighton University. It can now be seen at the Sussex Heritage Centre at Hassocks. The dynamo was manufactured by Siemens at Woolwich in 1878 and generates 50 volts DC at 46 amps. It was driven by an Otto gas engine, now lost.

Planning permission has been granted for the rebuilding of Ashcombe Windmill at Kingston-near-Lewes. This was a six-sweep post mill destroyed in a gale in 1916, but sufficient photographs are available to allow it to be reconstructed so as to be almost indistinguishable externally from the original. Some iron parts even remain scattered about the site. Internally, however, things will be different. Although one pair of stones will be installed, the mill will principally be used to generate electricity. A maximum of about 35 kW is expected to be available. It is a planning requirement that any surplus should be exported to the grid in accordance with the renewable energy policy of the future South Downs National Park. It is thought that the mill will be kept turning for about 70% of the time. Work should start at the beginning of 2009.

The Amberley Working Museum has received a grant of some

£400,000 from the Heritage Lottery Fund for the restoration of their De Witt lime kilns and for the creation of an interpretative display. The lime-burning industry at Amberley lasted from the early 1800s to 1969. The kilns are a Scheduled Ancient Monument and are at present on the English Heritage 'At Risk' register. Support has also been given by the West Sussex County Council, Horsham District Council and the Friends of Amberley Working Museum.

In Kent, the 'New Ropery Experience' at Chatham was opened in July by Prince Michael of Kent (Patron, Chatham Historic Dockyard Volunteer Service). This is a new gallery formed in the ¼ mile long ropewalk to demonstrate to visitors the processes of ropemaking as used since 1816. The Prince also viewed some of the other work the CHDVS has carried out over the past year.

The Surrey Industrial History Group has been making awards to notable conservation projects in the county since 1983, commemorated by the presentation of a plaque for display at the site. A new booklet entitled *25 Years of Conservation Awards 1983-2007* describes each of the award sites and its present condition and accessibility. The 2008 award was given to the Charlotteville Jubilee Trust for the restoration of 'The Spike', the former casual ward of the Guildford Union Workhouse, as reported elsewhere in this issue.

The works of Swallow Tiles Ltd. at Cranleigh have closed down, having been refused planning permission for redevelopment. They made, by hand, clay roofing tiles, and had been in operation since 1860.

Alan Thomas



The Cody Flyer at the Farnborough Air Show

Photo: Farnborough Air Sciences Trust

Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review*.

- Berkshire Industrial Archaeology Group News*, 17, Spring 2008
- Brewery History*, 128
- Brewery History Society Newsletter*, 42, Summer 2008; 43, Autumn 2008
- Bristol Industrial Archaeological Society Bulletin*, 124, Summer 2008
- Conservation Bulletin (English Heritage)*, 58, Summer 2008
- Cumbria Industrial History Society Bulletin*, 71, August 2008
- Dorset Industrial Archaeology Society Newsletter*, 21, May 2008
- Greater London Industrial Archaeology Journal*, 9, 2008
- Greater London Industrial Archaeology Society Newsletter*, 236, June 2008; 237, August 2008
- Hampshire Industrial Archaeology Society Journal*, 16, 2008
- Hampshire Industrial Archaeology Society Newsletter*, 70, July 2008
- Hampshire Mills Group Newsletter*, 81, Summer 2008
- Histelec News: Newsletter of the South Western Electricity Historical Society*, 39, August 2008
- Historic Gas Times*, 55, June 2008
- International Molinology: the Journal of the International Molinology Society*, 76, July 2008
- Leicestershire Industrial History Society Newsletter*, Summer 2008
- Manchester Region Industrial Archaeology Society Newsletter*, 125, August 2008
- Merseyside Industrial Heritage Society Newsletter*, 286, June 2008
- Museum of Bath at Work Newsletter*, Summer 2008
- Northamptonshire Industrial Archaeology Group Newsletter*, 107, Summer 2008
- SAVE Britain's Heritage Newsletter*, December 2007
- Scottish Industrial Heritage Society Bulletin*, 48, September 2008
- Suffolk Industrial Archaeology Society Newsletter*, 101, May 2008
- Surrey Industrial History Group Newsletter*, 164, July 2008; 165, September 2008
- Sussex Industrial Archaeology Society Newsletter*, 139, July 2008
- Sussex Mills Group Newsletter*, 139, July 2008
- Trevithick Society Newsletter*, 140, July 2008
- WaterWords: News from the Waterworks Museum, Hereford*, Summer 2008
- Yorkshire Archaeological Society Industrial History Section Newsletter*, 73, Late Spring 2008

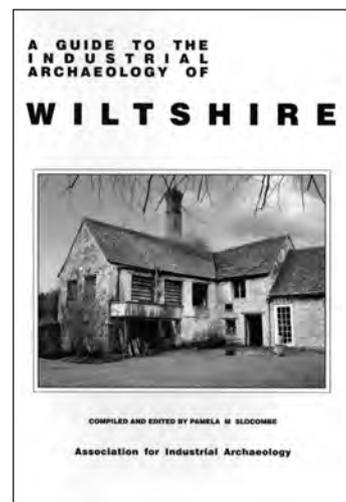
Books received

*Bishop Rock Lighthouse*, by Elisabeth Stanbrook, Twelveheads Press, 2008. 184 pages, 86 illus. ISBN 978 0 906294 69 7. Soft back £16.00.

The famous rock lighthouse off the Western Rocks of the Isles of Scilly, with nothing but the Atlantic between here and America. Three generations of the Douglass family (Nicholas, James and William Tregarthen) worked as engineers for Trinity House on the three lights established here. James Walker's first iron lighthouse was hardly finished when it was destroyed by a storm in 1850. This was replaced by a granite tower in 1858 but the relentless battering by sea and weather caused weaknesses so the whole structure was enclosed and heightened to a magnificent tower 147ft high in the 1880s. The workforce struggled with great skill, courage and tenacity on the wave-swept rock. Supplies of building materials, the accommodation for the workmen, initially on the remote rocky islet of Rosevear, and communications were challenging in the extreme. Despite the lighthouse the dangerous rocks still took their toll, with horrendous shipwrecks such as the German liner Schiller in 1875, when the keepers could do nothing but watch the helpless survivors; this was long before there was a system of communicating with the rescue authorities. This well-produced book tells the story of the lighthouse's construction, the workers who built and maintained it, the keepers who ensured it was always available, and the relief boatmen who provided the vital link. The book draws extensively on original documents, photographs and plans, many published for the first time.

*A Guide to the Industrial Archaeology of Wiltshire*, ed. by Pamela M. Slocombe, Association for Industrial Archaeology, 2008. 64pp, 90 illus & maps, mostly in colour. ISBN 978 0 9560251 0 4. £5.50.

Published for the Annual Conference at Lackham in August 2008, this is the first AIA guide to include colour illustrations throughout. There are over 400 sites in the five districts listed in the gazetteer, demonstrating the wide variety of industries, including rural breweries, maltings, iron working sites, underground stone quarries, tanneries, glove making, mills, woollen, silk and flax textiles, as well as road, canal and rail transport. The county has iconic sites such as John Rennie's magnificent flight of locks on the Kennet & Avon Canal at Caen Hill, Devizes, and I.K. Brunel's 1841 Box tunnel on the Great Western Railway.



*John Penn and Sons of Greenwich*, by Richard Hartree, 2008. 128pp, 83 illus. ISBN 9-781-84306-411-4. £14.99. Obtainable, plus £1.50 p&p from Richard Hartree, Stables Cottage, Sibford Ferris, Banbury OX15 5RE, email: penn@hartree.org.uk.

Established at Greenwich in the 1790s, John Penn I's firm grew through three generations into a leading marine engine supplier to the Royal Navy and other world navies. Nearly half the navy's engines were supplied by Penn in the 1850s, including gunboats used at the Crimea. They manufactured reliable trunk engines, such as used in HMS *Warrior*, and oscillating engines, a survivor of which on the steamer *Diesbar* was recognised in July 2008 as a 'Historic Mechanical Engineering Landmark' (see page 16). A three-cylinder compound engine was less successful. Other innovations included John Penn II's successful lignum vitae propeller shaft bearings, patented in 1854. The Greenwich engineering site, however, was poorly sited and there were always difficulties transporting heavy loads through the streets to the Thames where ships were fitted out. Financial difficulties resulted in the firm being bought in 1899 by the famous shipbuilders Thames Ironworks, but the works finally closed in 1912. The book tells a fascinating story and gives an insight into the Royal navy's attitude towards steam and engineers. The care the Penns took with their employees is also highlighted. An epilogue by Prudence Penn tells of the family's contrasting twentieth-century role of 60 years service in the Royal Household.

*The Victorian Asylum*, by Sarah Rutherford, Shire Publications, 2008. 56pp, 76 illus, many in colour. ISBN 978 0 7478 0669 1. £5.99.

In the new-look Shire Library series, this book gives an insight into Victorian asylums, their history, their often imposing architecture and their later decline. Britain's nineteenth-century asylums provide a unique window on how the Victorians housed and treated the mentally ill. Despite good intentions, they became warehouses for society's outcasts. Hidden in the countryside, there were 120 or so in England and Wales alone. Today many asylum buildings have gone or are threatened, or turned into private homes, their original uses forgotten. The book includes contemporary illustrations and plans of the buildings and their surrounding grounds.

**THE BOOK HOUSE**

The leading industrial archaeology booksellers since  
1963 – books on all aspects of technology & transport

LISTS ISSUED – FREE SEARCH SERVICE

The Book House, Grand Prix Buildings, Brough, Kirkby Stephen CA17 4AY  
Tel: 01768 342748 www.thebookhouse.co.uk

## 19-20 NOVEMBER 2008 ON THE WATERFRONT CONFERENCE

at Liverpool, the European Capital of Culture 2008, a major international English Heritage conference to explore the future of port cities, from Shanghai to Mumbai. There is a full programme of workshops and Liverpool city walks. To book a place visit [www.english-heritage.org.uk/onthewaterfront](http://www.english-heritage.org.uk/onthewaterfront).

## 4-5 APRIL 2009 AIA AFFILIATED SOCIETIES WEEKEND: 'CONSERVATION PLANNING FOR COLLECTIONS'

at Ironbridge, advance notice only. See page 11 for more details.

## 25 APRIL 2009 SERIAC

at the Guildhall, Winchester, the South East Region IA Conference on the theme of IA in Hampshire and the Isle of Wight, with a post-conference visit to Twyford Waterworks. Hosted by Hampshire IA Society. Advance notice.

## 16 MAY 2009 SW&WRIAC

at The Charles Hastings Education Centre, Worcester, the South Wales & West Region IA Conference, organised by Worcester IA and Local History Society. Advance notice. For further details and a booking form please contact Christine Silvester, 12 Upper Park Street, Worcester, WR5 1EX. Email enquiries to Roger Tapping at: [roger@rogetapp.co.uk](mailto:roger@rogetapp.co.uk)

## 3-7 JUNE 2009 FE 09 COALBROOKDALE 300 - FOOTPRINTS OF INDUSTRY

at Ironbridge, a celebration of 300 years of coke smelting of iron and 50 years since the restoration of the old furnace at Coalbrookdale, with lectures, keynote addresses and field visits. Hosted by the Ironbridge Gorge Museum Trust, with the AIA, Historical Metallurgy Society, Society for Post-Medieval Archaeology and the Newcomen Society. See the AIA website for more details.

## 30 AUGUST - 5 SEPTEMBER 2009

**TICCIH 14TH CONGRESS :  
INDUSTRIAL HERITAGE,  
ECOLOGY AND ECONOMY**  
at Freiberg, Germany. Advance notice only.

## 4 SEPTEMBER 2009 THE STUDY OF OUR INDUSTRIAL PAST

at the University of Lincoln, the pre-conference seminar. Advance notice only.

**4-10 SEPTEMBER 2009  
AIA ANNUAL CONFERENCE**  
at the University of Lincoln. Advance notice only.

## 5-8 NOVEMBER 2009 ARCHAEOLOGY OF BRIDGES

at Regensburg, Germany, this international congress aims to provide a discussion forum for the identification of locations, development and construction principles of bridges in different regions and countries, from prehistory to the beginning of the

nineteenth century, based on archaeological and historical research. The formal Call for Papers will be published in October 2008. Papers and posters can be submitted as from now. For further information send an e-mail to [bridges2009@t-online.de](mailto:bridges2009@t-online.de).

*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.*



*SS Robin leaves the West India Docks and the financial world behind, 28 June 2008 (see inside, page 13)*

*Photo: R J M Carr*

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

Editor: Dr Peter Stanier

*Published by the Association for Industrial Archaeology. Contributions should be sent to the Editor, Dr Peter Stanier, 49 Breach Lane, Shaftesbury, Dorset SP7 8LF. News and press releases may be sent to the Editor or the appropriate AIA Regional Correspondents. The Editor may be telephoned on 01747 854707 or e-mail: [aianewsletter@yahoo.co.uk](mailto:aianewsletter@yahoo.co.uk).*

*Final copy dates are as follows:*

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

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

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