

# INDUSTRIAL ARCHAEOLOGY NEWS

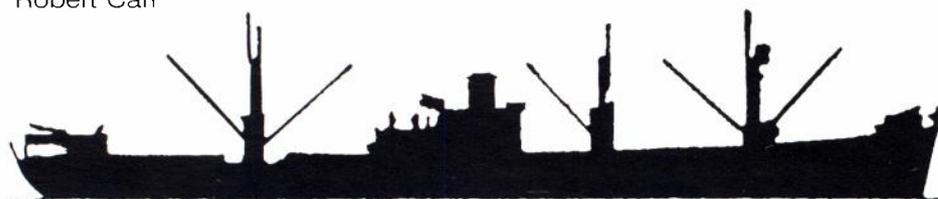
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## Liberty at Sea

Robert Carr



*The famous mass-produced Liberty Ship design was Britain's lifeline during the Battle of the Atlantic half a century ago. In June last year, the last unmodified survivor, the ss Jeremiah O'Brien visited Europe and there was an opportunity to visit her when she moored in the Pool of London before she returned home to America for the final time.*

At the height of the Battle of the Atlantic during World War II, merchant ships supplying Great Britain were being lost at a rate three times that at which British shipyards could hope to replace them. It was US innovation, mass production and organisation that plugged the shipbuilding gap and helped prevent Britain being starved out of the war. Prior to the late 1930s, America had for quite a long time not had much experience in merchant-ship building - it had almost become a lost art and the problem of producing new ships was tackled in a way a traditional shipbuilding nation was unlikely to have contemplated. The Liberty Ships as they became known were turned out in colossal numbers.

## Soap study

*Port Sunlight has been the subject of a photographic survey by a team from the RCHME. The results can be compared with the work of Bedford Lemure who photographed the model village in its newly built state from the late 1880s onwards. Port Sunlight was built by the first Lord Leverhulme (1851-1925) as a planned community around a series of tidal inlets on the Wirral Peninsula, with curving roads and tree-filled landscapes. Leverhulme held a close interest and even dictated the design of tenants' front gardens to ensure a uniform appearance. The RCHME study extended outside the core conservation area, identifying estate houses for agricultural (rather than factory) workers, and locating their architects and dates.*

A major figure in the Liberty Ship programme was the US construction engineer Henry J Kaiser whose previous experience had been with big dams such as the Hoover, Bonneville and Grand Coulee, and the San Francisco Bridge. He was not a shipbuilder, Merchant ship construction was revolutionised, huge numbers of identical welded (rather than riveted) vessels were built using prefabrication techniques in large yards that could employ relatively unskilled labour. About one third of the workforce were women.

To start with it took about 245 days to build a Liberty Ship, and the first, the *Patrick Henry*, was

launched on 27 September 1941. Construction time was gradually reduced to below 100 days and then ten days. Finally as a propaganda stunt, the *Robert E Peary*, yard number 440, was erected in a record four days 15½ hours. She was launched at Henry J Kaiser's shipyard, Portland, Oregon, on 12 November 1942. A total of 2,751 Liberty Ships were built by 18 yards: the largest number of identical vessels ever constructed. One might think of Kaiser as the Henry Ford of shipbuilding.

This immense constructional achievement solved the problems of finding ships to supply Britain across the Atlantic. However, the Liberty Ship design did acquire an unfortunate reputation as a consequence of structural failures. Being welded, any crack in the steelwork could spread right around the ship and from 1943 there were cases of vessels actually breaking in two while at sea. With a traditional riveted ship made from separate steel plates a crack is unlikely to propagate beyond the edges of the plate affected. In the Liberty design, stress was concentrated at the sharp corners of cargo hatches and there was a



**Ironbridge weekend ● Industrial fallout ● IRIS news ● Newest Canal ● Regional News  
Netherlands visit ● Liberty Ships ● Letters ● Sheffield Society ● Listing quandary**



Stern view of the *Jeremiah O'Brien* moored in the Pool of London, from the South Bank, June 1994

Photo: R J M Carr

major problem at deck level a short way in front of the bridge. The steel used generally was found to be inferior in strength at low temperatures and a number of failures occurred in Arctic seas. Very often failure would start from a bad weld.

However, the problem of brittle fracture was solved by strengthening and rounding critical hatch corners and riveting crack arrester plates in appropriate places. The Liberty Ship programme was certainly a success when one considers the wartime circumstances and that out of 2,751 ships built, 400 suffered fractures but just 90 of these vessels had serious problems. In 20 ships, failure was total but less than 12 actually broke in two. The *Robert E Peary*, rapidly assembled in record-breaking time, was quite long-lived, being broken up in Baltimore as late as June 1963.

The 50th anniversary of the landing of Allied forces in Normandy in 1944 was commemorated on 6 June last year. Among the ships which took part in the D-Day commemoration was the Liberty Ship ss *Jeremiah O'Brien*, the last survivor in operational condition of the more than 4,000 vessels which originally sailed for France. This ship is the only Liberty Ship in unmodified condition still seaworthy, still having sharp corners to her hatches and no crack arrester plates fitted. The efforts of Admiral Thomas J Patterson over a considerable number of years kept the vessel from being scrapped until 1978 when sufficient interest could be aroused to have the ship restored to working condition. She left Suisun Bay, where she had lain in reserve since February 1946, under her own steam on 6 October 1979.

In April 1994, she set off from San Francisco on a voyage visiting Portsmouth, Southampton, Chatham, London, Cherbourg, Rouen and Le Havre. At her several ports of call the public were allowed to visit most parts of the vessel in a very generous fashion and we had a glorious opportunity of examining at close quarters a traditional steam-powered ocean-going freighter still very much in working order. Although a 1940s welded ship, the basic overall design is in many ways not

so very different from vessels built in Britain at the end of the nineteenth century. Around 1941, it was the welded construction, now almost universal, that was relatively novel, the Liberty Ships otherwise being essentially conservative and by the standards of their time low tech. In conditions of wartime emergency more sophisticated technology was reserved for fighting ships rather than transports.

The *Jeremiah O'Brien* is 441 feet 6 inches long overall, has a beam of 57 feet and is 7,176 tons gross. Powered by a triple expansion steam engine driving a single screw, almost all other power comes from reciprocating steam engines of various kinds. Apart from many deck winches, the engine room is simply crammed with reciprocating steam plant such as pumps and generators, all in good condition and working – a veritable Aladdin's Cave for the steam enthusiast. The main propulsion engine is based on a design of the North Eastern Marine Engineering Co Ltd of Sunderland, England, and was built by the General Machinery Corporation, Hamilton, Ohio, number 7242, dated 7 May 1943. It is of the classic inverted-vertical type with cylinders 24½, 37 and 70 inches in diameter and a stroke of 48 inches, giving about 2,500 horse power at 76 rpm and a service speed of 11 knots. Steam at 200 psi is supplied by a pair of cross-drum sectional sinuous header straight-tube oil fired boilers. There are three sets of reciprocating steam powered electricity generators of inverted-vertical type each producing 20 kW of dc at 120 volts.

The keel was laid on 6 May 1943 and the ship was built in 56 days at Westyard, South Portland, Maine, by the New England Shipbuilding Company, and number 230. The hull shape is based on the British 'Ocean' design and the *Jeremiah O'Brien* differs from a traditional British freighter mainly in the accommodation for her crew who, apart from some gunners on the poop, are all put together in a single midship house. Conditions generally are better than was considered appropriate this side of the Atlantic. Visiting the crew's quarters and talking to the veteran volunteers who sailed the ship more than 7,000 miles was a pleasantly memorable experience.

It was originally intended that a convoy of three large old steam-powered cargo ships would



Showing visitors around the lower deck of the engine room, on board the *Jeremiah O'Brien*, Pool of London, June 1994

Photo: R J M Carr

cross the Atlantic to commemorate the 50th anniversary of D-Day. These were to be the Liberty ships *Jeremiah O'Brien* and *John W Brown* and the Victory ship *Lane Victory*. The Victory ships were a later, more sophisticated design which superseded the Liberties. The *Lane Victory*, built in 1945, dropped out with boiler trouble and the *John W Brown*, built at Baltimore in September 1942 and in use in New York as a stationary school ship until 1982, had to cancel her voyage owing to lack of funds to cover repairs.

The *Jeremiah O'Brien* has since returned to her home port and is most unlikely ever to cross the Atlantic again. Bringing an elderly Liberty ship to Europe was quite a perilous undertaking and even when the present writer last visited the *Jeremiah O'Brien* there were considerable financial problems and no money to buy oil fuel for the voyage home. The National Liberty Ship Memorial Inc is a Californian non-profit-making corporation which restored and maintains the vessel. If you would like to know more, contact the ss *Jeremiah O'Brien*, Building A, Fort Mason Center, San Francisco, CA 94123-1382, ☎ 415 441 3101, Fax 415 441 3712. □



Top of the triple-expansion engine of the *Jeremiah O'Brien*, Pool of London. At lunchtime the ship was invaded by eager City gents.

Photo: R J M Carr

# AIA visit to the Netherlands

Janet Spavold

This was a most successful trip, packed with interest throughout. Our visit was arranged by Jur Kingma and Jan Vanbruggen, who were also our guides.

**Wednesday:** After an overnight Harwich-Hook of Holland sailing, we breakfasted in Schiedam at De Branderskelder, a brewery museum originally built as a hospital. A walk through the canal and river port of Schiedam followed. Here we saw our first windmills – the tallest in the world, and without fantails or patent sails. Scheidam made its fortune through the gin distilleries. We toured the De Tweelingh branderij, built in 1795, which is the only one now using pot stills. We briefly viewed the Maritime Museum in Rotterdam, on the way to the windmill complex at Kinderdijk. The Alblasserwaard region has been drained since the tenth century. As the peat subsided and river levels rose, gravity drainage was inadequate. Wide canals acting as reservoirs were built, and post mills with a hollow post to house the drive shaft raised the water. The gearing is at the base, with Archimedean screws. The Museum of Dredging at Sliedrecht records an important industry. It has a preserved dredger, and models of dredging methods; one, which operated for us, was a dredger working in sand in a large tank. Vreeswijk was an interchange for trade between the ports and inland towns; its first locks were built in the fourteenth century. A series of subsequent locks accommodated the growing traffic.

**Thursday:** Dr Aijolt Brogers accompanied us and explained the problems of geology, water control, drainage and endikement. We saw the effects of the creation of polders and the increasing use of land for agriculture, and traces of the January emergency this year. At Loenen we visited De Middelste Molen, a steam and water-powered papermill, guided by two papermakers. Watercolour paper is made, using English machinery dated 1890. Next, to the Maritime Archaeology Museum at Ketelhaven on Flevoland Polder, the most recently created. We visited the museum and its conservation workshops where the staff explained their philosophy and work. The Zuiderzee could produce dangerous seas over its shallows, but it was an important fishing ground and trade route. Once the IJsselmeer was created

in 1932, polders were drained and wrecks appeared. They are recorded and excavated according to their maritime importance. 435 wrecks dating from the thirteenth to the nineteenth centuries are known. The Hertog Reijnout steam-powered scoop wheel drains the Arnhem endikement at 340 gallons per minute. The steam engine is by Backer & Rueb (1882) and is a horizontal single cylinder double-acting engine of 23 inch bore and 25 inch stroke. The boiler is a Cornish type, with flamelubes. In 1983 the engine was passed to a trust; restoration cost £500,000.

After dinner we were introduced to the Netherlands Institute for Industrial Heritage (PIE), which has a programme to conserve key non-movable industries and set up a collection of movable items before 2000. About 40 branches of industry have been identified. A branch history was completed first and then used to produce a typology for it. Sites were ranked according to three criteria (socio-economic, technological and how complete they were). Typology definitions were issued to local volunteers who decided the site's importance. Recommendations for the site's future were made on that basis. There are pilot schemes for re-use and adaptation, tourist development and media involvement. Business is involved, and it is intended to establish a Chair in Industrial Heritage.

**Friday:** The Railway Museum at Utrecht, where the major problem is that the exhibits are out of doors. The curator discussed restoration policy. As they only have ten steam engines they operate with replicas but they do run a 'reservation plan' for current equipment. I thought the stars were the Orient Express coaches, magnificently restored in 1974. Two windmills at Westzaan, De Schoolmeester (1692) for papermaking and Het Prinsenhof (1722) for barley hulling were next. After lunch we moved to Wormer and were shown over the Lassie rice factories. The disused Art Deco building will be preserved; the series of older brick buildings contained cast iron or wooden columns and girder beams. The elevator and silos date from 1916: a good example of modern plant in an old building. Jur Kingma provided a detailed commentary as we travelled by riverboat to Amsterdam, where we walked around the nautical

quarter.

**Saturday:** At Lelystad we saw the Missouri stern-wheeler *Mark Twain* and the replica East Indiaman *Batavia*. After a detour for a small shiplift at Broekerhaven we visited the Nederlands Stoommachinemuseum, opened in 1985 at a pumping station which used two 1898 horizontal compound steam engines to operate four centrifugal pumps. In 1924 a Backer & Rueb unafrow engine was installed and worked until 1972. This engine and many others are displayed in steam. We travelled from Medemblik to Hoorn by steam tram. The track operated from 1887 to 1934, briefly in the late 1940s, and then as a tourist attraction from 1972. The engines have been restored; we were hauled by No 16, and saw GS18 *Leegwater*, a side-fired box type. The sheds and workshops were visited too. The final highlight was the massive and impressive Cornish engine from Harvey's of Hayle at Cruquius. It was one of three which drained the Haarlemmermeer between 1848 and 1852; it worked until 1933. The castelated tower wall supports eight beams; the engine uses compound internal expansion, with two cylinders, one inside the other. The external diameter is 144 inches. Other engines were displayed here.

I was greatly impressed by the English translations provided at our visits. Many were done specially. Planning was meticulous throughout and the work of all our guides at the sites was much appreciated. Paul Saulter of Heritage of Industry arranged our travel and accommodation at Driebergen and David Alderton made the AIA arrangements. □



left: *The forest of windmills at Kinderdijk: the popular image of the Netherlands*

top: *Anne Alderton receives instructions in papermaking from Mr Zegers, the owner of De Middelste Molen paper mill at Loenen*

above: *Members in the cap of one of the 19 pumping windmills at Kinderdijk*

# Not oppressively daunting: coping with the closure of major industrial sites

Geoffrey Starmer

As we approach the millenium, there is a growing interest and appreciation of the significance of twentieth century industrial sites, many of which are very large indeed. Most timely therefore was the theme of the AIA Affiliated Societies Weekend at Ironbridge on 1-2 April 1995. This is a shortened version of a detailed paper circulated to affiliated societies.

Five questions, taken up by subsequent speakers, were posed by Dr Miles Oglethorpe in his opening contribution on the problems and need for adequate recording of large industrial sites.

## 1. what is a large industry?

There is a distinction between a large **site** (eg the Forth Bridge) and an **industry** carried out on a national scale (eg steelworks, power stations or chemical works).

## 2. what is important about a large industry?

It may be the last example of a once widespread process, eg Ravenscraig was the last cold-rolling plant in the Scottish iron and steel industry. Or, it can be important because of its effect on people. Referring to coal, no other single industry had done so much to influence the lives of people in, around and served by that industry.

## 3. what is happening to large industries?

Often the beginning of changes in an industry are apparent only to those working in, or intimately connected with it. Important evidence could be destroyed before its significance in a wider context is recognised.

## 4. how should we respond to these changes?

Miles recommended a methodology which included: getting in early before closures; a 'magpie' attitude in collecting as much information as possible; saturate with photography – and document every image taken; aerial photography to get a feel of the extent of a large industrial site; prior homework so as not to waste people's time; diplomacy at all stages since a dying industry is full of sensitive and disenchanted people; and observance of Health and Safety regulations to ensure goodwill.

## 5. what material evidence and documentary records already exist?

Such might include insurance plans and schedules. Training departments often have plans which show the overall layout. Publicity booklets often show stages of production and the equipment used.

Introducing a methodology for researching and evaluating industrial complexes, Dr Michael Stratton listed some prejudices against twentieth century industry:

– buildings tend to be standardised, lacking regional variations.

– buildings are not related to particular processes but have an element of 'loose fit' accommodating a wide range of machinery and processes, whereas earlier buildings had a 'close fit' of form and function.

– buildings are too large to preserve [but they provide a valuable building stock].

– buildings stand in the way of economic revival and job creation [yet in dock areas the original buildings have been the key to regeneration].

In recording twentieth century sites, Michael suggested that archive drawings should be collected wherever possible and record photography (including aerial) undertaken on selected sites, but we should accept that such sites cannot be measured in detail. Illustrating this approach, he talked about his work on the Coventry car factories. The specialised trade journal *Automobile Engineering* provided a good overview of the industry, from which it was possible to develop a typology for the buildings based on phases. In conclusion, Michael assured us that the challenge of evaluating twentieth century industry is **not oppressively daunting**. Typologies allow researchers to identify key buildings and there is likely to be only a very small number of pioneering 'flagship' sites. Accessing deposited plans and other documentary evidence can save valuable recording time. Therefore, industrial archaeologists must not lose their nerve when faced with twentieth century industrial sites.

Dr Bob Carr, known for his research into London Docklands, considered some issues in trying to record the London ship repairing industry before it closed. These were: no advance warning of closure, problems of access and too much to record (hence the use of large-scale OS maps and Goad's insurance plans). Bob illustrated the industry along the River Thames upstream from Tilbury, highlighting ship repair facilities and major industrial sites such as the Beckton gas works, Ford's Dagenham plant and Woolwich Arsenal (difficult to enter but we saw some photographs which had 'escaped'!). Bob's aerial views of the docks reinforced the value of aerial photography.

Shorter contributions included Geoffrey Starmer on the recording of the final years of iron ore extraction in Northamptonshire for the Corby furnaces. Dr Kirk of ICI discussed the demolition of his company's catalytic converter at Billingham. He showed excellent aerial views of the ¼ mile-long plant for changing coal to oil, before and after demolition. He also described the massive items of equipment used in high pressure technology, including the very high maintenance shed of 1934 which had 60 ft deep holes in the floor into which the very long pressure vessels were lowered in order to be able to lift out their innards.

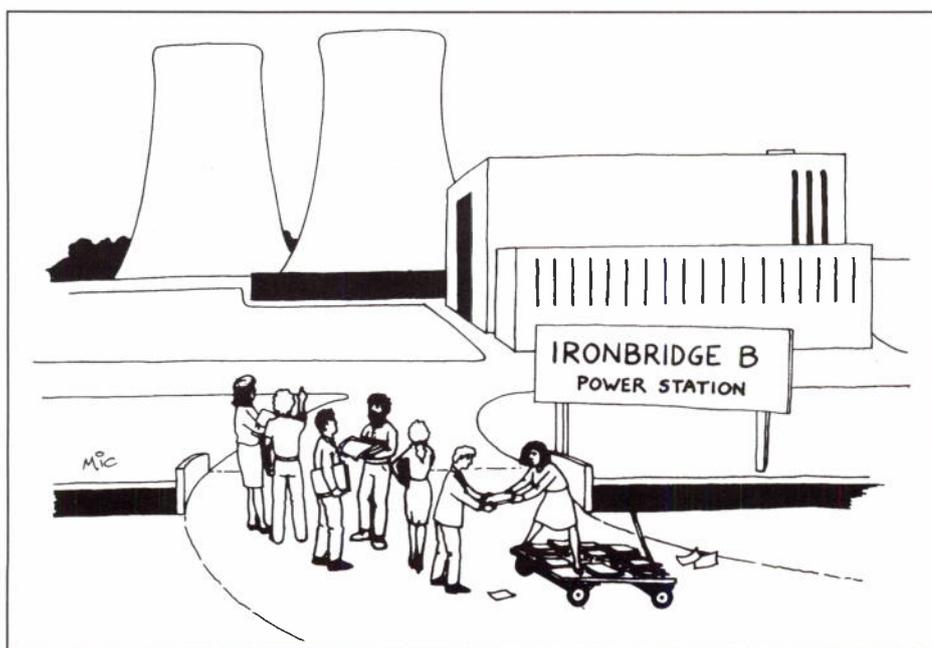
The Saturday afternoon visit to Ironbridge B power station was to look at the essential features which should be recorded before closure. So much part of the Ironbridge scene, it is hard to believe the station's days are numbered. When opened in 1969-70, it had an engineering life of 40 years but changed circumstances in the industry may curtail this much sooner. We covered all major aspects – coal handling and preparation, boilers, ash disposal, turbo-alternators, cooling towers and control room. The physical size of each of these provoked considerable discussion as to how they should be recorded. Although many of us took advantage of the opportunity for photography, most were relieved that the aim of our visit was not serious recording.

After the evening dinner in the New Inn at Blists Hill Museum, David de Haan, Keeper of Collections, Ironbridge Gorge Museum, entertained us on 'Art and the Industrial Revolution' and showed that artists' responses to the industrial revolution was often from a very narrow viewpoint and very biased!

The first session on Sunday morning brought us back to the importance of existing records to save fieldwork time on a large site. Janet Atterbury of RCHME described the difficulties encountered in saving the records of the coal industry where, despite nationalisation, records tended to be kept in the separate Coal Board areas and there had been no standard procedures for the records, so what had been retained at one centre had been destroyed at another. A great deal depended on the person responsible for the records. If Janet, with the backing of the Royal Commission behind her, had such difficulties one wonders how an individual industrial archaeologist would fare in this or other large industries.

The answer to this came in Amber Patrick's talk on the closure of E S Beavan (Maltings) Ltd, the largest surviving floor malting company, with maltings at Diss, Great Yarmouth and Warminster. From her experience, and reinforcing Miles' opening points, she recommended we should get to know the site and workforce before closure, know what questions to ask beforehand, be tactful with

*continued on right*



# Airborne fallout from Industrial sources

K A Martin

*The use of pollen grains surviving in peat deposits to establish past vegetation and climatic changes is a procedure well known to archaeologists. It is now possible that traces of minute particles found in some peats could represent industrial fallout. Using an example from South Wales, this preliminary note suggests that here is a new angle of research on the effects of industrial processes during the Industrial Revolution period.*

Over the last few years I have been investigating an extensive bog situated at an altitude of 480 metres at Gwaun Nant Ddu (SO 087154) on the edge of the Brecon Beacons National Park. The depth of the peat is in excess of 8 metres and there are good grounds to believe it to have once been a lake. The feature was formed by a glacial moraine damming the end of a valley, and it could provide a lengthy and continuous layer of sediments from the underlying clay to the surface with growing sedges and grasses, and thus give a valuable insight into changes in vegetation and climate over a lengthy period of time. This work is far from complete, but one discovery can be reported as of interest in its own right, in this preliminary note.

A core of approx. 140 cm was taken near the edge of the bog so that the deepest end reached the clay bed of the feature and the uppermost contained the surface layer of vegetation. Samples were taken at 2.5 cm intervals and these were treated and examined for pollens and other remains according to the standard procedures.

The peat samples taken from immediately below the surface, ie within the top 2 cm, after extraction, showed not only the pollens but also the presence of small objects of a glassy appearance which, from their shape and the inclusion of bubbles, appeared to have been molten at some stage. They vary in size from a few micrometers in diameter to about 30 micrometers. All contain bubbles, some having the appearance of a closed cell foam, and a high proportion are hollow spheroids. There appears to be an inverse correlation with the size and degree of porosity in that the smallest contain fewer bubbles. The dominant type is of clear glassy material but there are also some black particles which show signs of dispersion or dissolution. There are also black fragments which may be the remnants of partially dissolved or dispersed black particles.

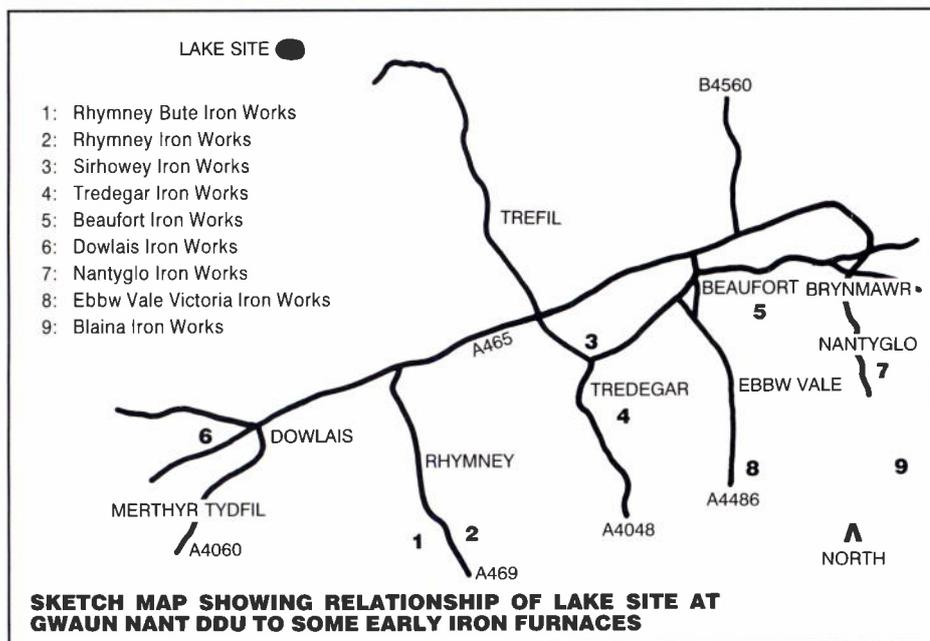
Because of the unexpected finding of these distinctive particles, further samples were processed taking great care to avoid any possible causes of contamination and adding a further treatment with acidified sodium hypochlorite. This resulted in slides of improved clarity which fully confirmed the original findings.

These particles were only found in the surface and immediate sub-surface layers, where they suddenly appear in substantial quantities and must therefore belong to the near historic period. Bearing this in mind together with the location (barely 6 kilometres north of the early iron-working areas of Tredegar, Rhymney, etc), it would seem probable that they are fallout from early industrial

furnaces carried, because of their lightness, by the prevailing wind and possibly funnelled by the valley to the south. This would account for the more frothy, lower density, nature of the larger particles.

Clearly, much work remains to be done into their origins involving such things as dispersion patterns (by sampling over a wide area), chemical composition (electron probe microanalysis) and the precise industrial processes involved (eg blast furnaces, Bessemer converters, electricity generating stations, etc). With modern analytical techniques it might be possible to 'fingerprint' the particles and thus find the actual sources. In the meantime, the very existence of such particles should have a value as a datable horizon.

Some time after this work was done, a similar particle was discovered in samples of fresh pollen taken in a rural lane near Llangynidr, which led to speculation that such particles are still being emitted by industrial combustion processes. To check this, sample jars were placed in the open in Tredegar, which no longer has any heavy industry, and these were found to contain similar particles when examined at the end of a six-month period, October 1994 to March 1995. It would appear therefore that these particles are ubiquitous and might be of value to the environmentalist as well as the industrial archaeologist. □

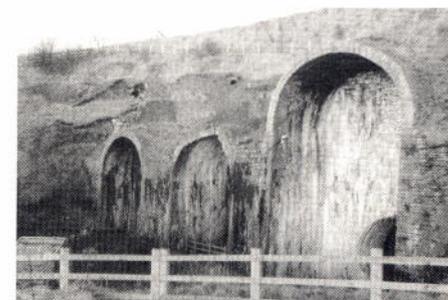


above: Under the microscope: a hollow glassy sphere and a part-dissolved black type.

Scale: 50µ wide.

below: The old Sirhowey Iron Works: guilty of airborne pollution?

Photos: K A Martin



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people who will be losing their jobs, respect insurance requirements, and help the firm with contacts for local museums, record offices, etc. The ensuing discussion raised the question as to how you introduce yourself to a firm – as a member of the AIA, a member of the local IA society or as a private researcher?

Delegates were reminded that recording *must* be followed by evaluation when Derek Manning

outlined his procedure for recording the Lenwade Pre-stressed Concrete Works of c1940-70. The democratic attitude of the AIA was demonstrated when Ron Martin berated IRIS by focusing on its classifications which he felt were too restricting. He gave so many examples of what he thought were contradictions that anyone having had apprehensions about IRIS was convinced that IRIS was a good thing after all! IRIS was developed by Jane Robson who spoke of the need to get IRIS

forms from **all** areas of the country.

The proceedings were summarised by our President John Crompton, and we must thank Gordon Knowles for arranging a very worthwhile weekend and raising the profile of a most important, although often neglected because of its scale, aspect of industrial archaeology. □

## Presentation of the President's Award for 1994

On April 21 the plaque of the AIA President's Award was given to HMS *Warrior* at a ceremony on board the ship in its dock at Portsmouth. John Crompton and Carol Whittaker came down from Scotland for the occasion, which was also attended by Tony and Mary Yoward with John Silman and his wife Margaret (those who were at the Conference in 1994 will remember John's enthusiastic commentaries and be pleased to know that he is well again). Photographs were taken of the presentation on the deck by *Warrior* staff and a reporter and photographer from the *Portsmouth News*. Afterwards, the Captain and members of his staff entertained us in one of the cabins for a very pleasant hour. As the ship is kept in its 1860 condition, the plaque cannot be displayed on board, but has been mounted temporarily in reception and will be put into the new display and information area when that is completed. So when you visit the *Warrior*, look for our blue plaque and if the Captain is about, do say hello to him – I am sure that he would like to know of our Association's continued interest in the ship.

Mary Yoward

## Extraordinary General Meeting

The AIA's Memorandum & Articles of Association were amended at the EGM held on 24 June at the Bir-

mingham Museum of Science and Industry. Members were earlier notified by post of the proposed resolutions to amend audit rules in response to recent legislation.

## Last chance for free membership!

You may remember that last year the AIA made an offer of free affiliated membership to any society completing more than 100 IRIS forms in a given period. Several of you have already qualified for this and have taken up the offer, notably the Shropshire Caving and Mining Club and the Surrey Industrial History Society. For those of you who still wish to take up this offer, may I remind you that the closing date is **MONDAY 11 SEPTEMBER 1995**. In order to qualify, the county SMR Officer must have received the completed IRIS forms by this date, and I must have either copies of the forms or a completed summary sheet.

Free membership is also on offer to the individual who has completed the highest number of IRIS forms in the same period. The same closing date and rules apply.

Jane Robson

## Regional correspondents

Readers will notice a vacancy for South East England. When the whole system works, it gives a good round-up of IA developments throughout the British Isles. The task is not onerous, so please don't let your region down, contact the Editor to volunteer your services!

## Future IRIS dates

The IRIS Initiative is out and about on its travels again and could soon be coming to a town near you! I have several appointments in my diary for forthcoming events, some of which are listed below. These include IRIS training sessions, conferences and local society meetings:

**8-10 September:** AIA Annual Conference, Sheffield

**14 September:** Annual Conference of the British Association for the Advancement of Science, Newcastle upon Tyne

**1 October:** IRIS recording day in Birmingham, organised by the City Planning Archaeologist for local groups and individuals

**21 October:** Dorset Industrial Archaeology day school, organised by Dorset SMR Officer

**11 November:** IRIS meeting with Yorkshire Archaeology Society (IA Section) and the West Yorkshire SMR Officer

Please feel free to come along and join in with any of the above events. I will be available to talk about any aspects of the IRIS Initiative and answer any queries you may have. For more information about these meetings, please contact me at Lancaster University Archaeological Unit, Storey Institute, Meeting House Lane, Lancaster LA1 1TH. ☎ 01524 848666.

Jane Robson

## Douglas Hague Memorial

Many members will remember Douglas Hague who died three years ago. Although he was an early supporter of the Bath conferences, a founder member of Council and one of the Association's first Honorary Vice-Presidents, conference attendees will remember him much more for the person he was. He had an impish sense of humour, a total disregard for appearances – bobble hat and shorts being his favourite attire – and passionately held views on the countryside, conservation of the industrial heritage and many other things. His member's contributions were invariably delightful, amusing but with a point to be made.

Council has for some time been looking for a suitable memorial for Douglas. Finally, it has been decided that as he thoroughly enjoyed the company of young people (indeed, he never quite grew up himself), that a fund should be created to give bursaries to help research students to attend Conference and present a paper. This proposal has the whole-hearted support of his family. Our Treasurer would welcome donations: cheques payable to the AIA should be sent with a covering note to M Messenger, Esq, 144 Lake Road East, Roath Park, Cardiff CF2 5NQ. *David Alderton*

**CONFERENCE REMINDER** The AIA annual conference is just a few weeks away now. If you want to see Sheffield and haven't booked a place there may still be room if you hurry!

## LETTERS

Readers are encouraged to write to the Editor with their views on matters raised in *IA News*, the *Comment feature* or other current issues.

### Contacts with German IA

My book *Bauten der 'Industrie und Technik' – Buildings of Industry* – has just been published by Deutsches Nationalkomitee für Denkmalschutz, the nationwide German state agency for the protection of historical monuments. Since it is the first comprehensive information for the whole of old and new federal states on the subject of Industrial Archaeology, it may be of interest for the readers of *IA News*. Although it is in German, its contents go further than my contribution on Germany in Barrie Trinder's *Encyclopedia*, which was written before we had our glorious reunion.

I have the feeling that the level of information on Industrial Archaeology activities in this country [Germany] generally could be slightly raised in Britain. If you agree with

that, I would be gladly willing to help with information and contacts. The fact that I am heading the nationwide group of Historic Monuments people in the field of industrial monuments could be helpful in doing just that.

Having myself learned a lot about IA when I took up my job as Conservation Officer of Industrial Monuments in 1974 by coming to Great Britain, I think that a comparative attitude, ie the willingness to get information from other parts of the world, still could form a useful attitude. Since a couple of years this aim in my eyes is not efficiently enough achieved by the TICCIH conferences alone. Maybe you and the AIA share this attitude and we could jointly do something about it.

Axel Föhl

Rheinisches Amt für  
Denkmalpflege,  
Postfach 2140,

50250 Pulheim, Germany

### Yorkshire industrial sites

Reference 'Large industrial sites and buildings in West Yorkshire' in *IA News* 92. The demolition of any building of architectural interest without record is, of course, to be deplored. However, readers may be encouraged to note that in recent years the West Yorkshire Archaeology Service has endeavoured to meet proposals for demolition or alteration of such buildings with strong recommendations for preservation by record and, where appropriate, for preservation in situ. In line with Planning Policy Guidance Document 15 and 16, these recommendations have met with a notable degree of co-operation from the Planning Departments whom we serve as archaeological consultants. As the result of a condition placed on the Listed Building Consent by Kirklees Metropolitan Council, the buildings of archaeological interest at Folly Hall Mills, Huddersfield, were

recorded archaeologically prior to demolition. A similar condition has been placed on the conversion of the London and North Western Railway warehouse; in addition, the hydraulic lift tower has been excluded from the development, as the result of archaeological recommendations.

Regrettably, much demolition still takes place outside the constraints which it is possible to impose by means of planning controls. Within the limits of the legislation, however, many curatorial archaeologists and planning departments across the country are attempting, and will continue to attempt, to prevent the type of needless destruction of our Industrial Heritage on which the AIA has done much to focus public attention.

Dr Stuart Wrathmell

West Yorkshire Archaeological  
Service, Wakefield

When does *restoration* become *reconstruction* or *replacement*? This is not a rhetorical question since it relates to the work being carried out at the present time by Calderdale MBC on the Rochdale Canal. In essence, the work is converting an upland canal, where flood control is the prime problem, to a lowland canal where the main concern is water conservation. This is being done by replacing a system of air holes with bye-washes on a section of the canal as it passes through the steep-sided Calder valley between Todmorden and Hebden Bridge.

The air hole system uses a slot in the canal side immediately above the top gate to pass water into the ground paddle chamber and thus into the lock chamber. This means that the bottom gates have to be left open in order to enable water to pass into the next pound. In times of flood, the excess water is discharged from the canal over adjustable side weirs into the nearby river. As designed, the system is fully automatic, requiring only that the lengthsman adjusts the side weirs during heavy downpours of rain.

However, Calderdale MBC is changing all this to a bye-wash system with the locks kept full, and with fixed-level side weirs. The result is that during times of flood the water overflows onto the tow paths, so that in April considerable damage was done. This never happened with the original air hole system which had functioned perfectly well since 1804. So much damage was done in April, that now when flood conditions arise an army of workmen have to go along the canal opening all the lower lock gates.

What is of particular concern about this matter is that all the work has been done on listed structures, apparently without Listed Building Consent. When the proposals were first made there was widespread opposition and the MBC decided to go for Listed Building Consent. As far as can be determined, no such application was ever made. In any case, since a large number of listed structures are involved, surely a Listed Building Consent would be required for each one. Surely, it is the case that listing includes both form and function, both of which are

## COMMENT

being changed. Calderdale MBC claim that the local English Heritage representative said he would not object to the proposed changes 'if they did not come too close to the locks.' The work of installing bye-washes has involved the cutting through of the counter-forts, buttresses supporting the lock walls, and the removal of material from immediately behind the lock wall. Since the locks were constructed to be left empty, they did not have puddle behind the walls, so that now they are left full considerable water seepage into the lock wall is taking place.

However, even more serious is the case of Black Pits aqueduct. This is puddled throughout but, in order to insert a bye-wash at one end, this was all removed and replaced by a mixture of sand, gravel and spoil. The aqueduct now leaks badly where this was done.

One would have imagined that *restoration* would have meant putting back into original working condition, and not replacing a system that has worked well for almost 200 years. It is a tragedy that such a historically important upland cross-Pennine canal should be changed in the way it has. It is even more worrying that English Heritage should have allowed such work to proceed. The work is totally unnecessary and a waste of public money. Here it is interesting to note the nearby Huddersfield Narrow Canal, which is also being restored, is in fact being *restored* and not *reconstructed*.

All is a very sad tale indeed. What should have been a relatively straightforward task of restoration to working order has become a saga of objection from many concerned bodies and individuals, all of which has been ignored or brushed aside. So what claim the Rochdale Canal had to be different, and to demonstrate that the canal engineers of 200 years ago knew what they were doing, has been removed. And the reason for all the change? So that the canal can be operated in the same way, ie locks left full, as all other canals currently in use. If standardisation is the aim, does this mean that on the Calder and Hebble all the hand-spiked paddle gears are going to be changed? I very much doubt it.

*Bill Thompson*

## NOTICEBOARD

### Engine houses in Scotland

David Bick is making a study of beam engine houses for mine-pumping, and though quite well acquainted with examples in England and Wales, says his knowledge of those north of the Border is lamentable! He would be very grateful for information as to sites, or articles on the subject, more especially regarding Newcomen or Boulton & Watt buildings. A number of the latter certainly were erected at collieries, and perhaps one or two have survived the universal policy of levelling so beloved of the late NCB. Any assistance will be of course acknowledged. If you can help, please contact David Bick, Pound House, Newent, Glos GL18 1PS. ☎ 01531 820650.

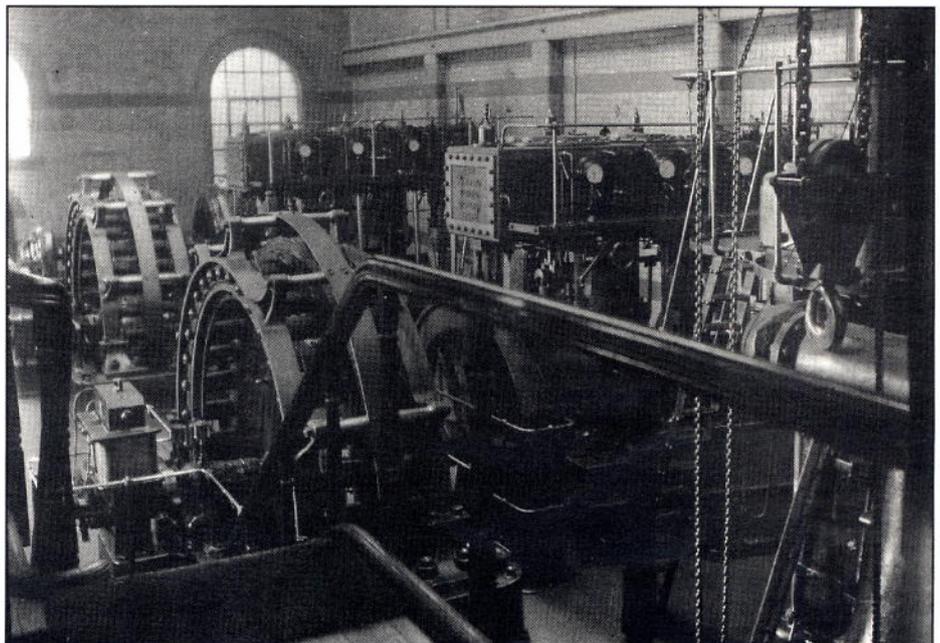
### Who made that gasholder?

John Powell, at the Ironbridge Gorge Museum, would like to hear from any reader who can positively identify any gasholder(s) in their locality made by the now defunct firm of C & W Walker Ltd of Donnington, near Wellington (now Telford), Shropshire. A company catalogue reveals that they installed gasholders at Beckton, Sheffield, Gorleston, Fenny Stratford, Holywell, Thetford, Witham, Bicester, Witney, Winslow and probably many other places as well. John asks that you do not trespass on any private or contaminated land in an effort to find out, but rely on binoculars or other ingenious methods to see how many can be located.

### Mystery photograph

The accompanying print has recently come to light. It is taken from one of four glass negatives depicting what appears to be a generating station. The triple-expansion(?) engines were manufactured by Davey Pakman & Co of Colchester, and the name Ferranti appears elsewhere in another

picture. The negatives were found in a box with other (non-industrial) plates, including a camping holiday labelled 'Wells, 1908', and wrapped in part of a Cardiff newspaper of 1920, which may or may not be a clue! Please send any suggestions - what it is and where it is - to the Editor.



## Black Country Livery

Over 50 Masters and Clerks of the Livery Companies visited the Black Country Museum at Dudley on 23 May. This annual event gives the Livery Companies, many of whom are supporters of the Museum's Capital Fund, an opportunity to view progress in the development of new exhibits like the transport display which was officially opened that day. Such visits also maintain the connections between the original skills of the City Livery Companies and the range of crafts developed and perfected in the Black Country over the years.

## Dale Street research

Following the discovery of an underground waterwheel beneath the 1806 Rochdale Canal Warehouse in Dale Street, Manchester, a full survey was completed by the Manchester Region IA Society in 1991. The wheel powered hoists in this and an adjacent building. Background research into the history of the site was added by students at Manchester Metropolitan University and a copy of the whole report has been presented to the Library and Record Centre of the Museum of Science and Industry. It is believed the study will add materially to the knowledge of the operation of early canal and railway warehouses in Manchester. The report has also been entered for a national archaeology field work award.

A D George

## English Heritage grants

In their publication *Grants 1993-94*, English Heritage has detailed the grants offered to various protected structures for the period April 1993

to March 1994. Over 700 properties received offers of grants totalling some £27 million, an increase on the previous year (see *IA News 92*). The listed industrial structures in receipt of aid included windmills at Burwell and Madingley in Cambridgeshire, Stansted Mountfitchet and Thaxted in Essex, Berkswell in the West Midlands, and Denver and Old Buckenham in Norfolk. Upwey watermill near Weymouth in Dorset also received a grant. Transport buildings included Gosport railway station in Hampshire, Charlton railway viaduct at Shepton Mallet in Somerset, the canal terminal warehouse at Sheffield and the Railway Roundhouse in Leeds, both in Yorkshire. Other recipients were the Kew Bridge Steam Museum in Hounslow, Masson Mills at Matlock Bath, a malt house at Chipping Camden, a hanger at Calshot on Southampton Water and several bridges.

Grants offered to Ancient Monuments included the Underfall Yard at Bristol and the Saltford Brass Mill in Avon, Cheddars Lane pumping station in Cambridge, Wheal Martyn China Clay Museum in Cornwall, Crosscanonby saltpans and Duddon Furnace in Cumbria, Hallsannery limekilns in Devon, Bocking windmill and the Beacon Hill radar tower at Harwich in Essex, buildings in Portsmouth Dockyard and the Spitbank Fort in Hampshire, Helmshore Mill in Lancashire, Papplewick pumping station in Nottinghamshire, Chilworth gunpowder mills in Surrey, Blackham's Hill winder house on the Bowes Railway in Tyne and Wear, and Top Forge at Wortley and the Shepherd grinding mill in Sheffield, both in Yorkshire.

## Froude Museum closure

Last year we reported (*IA News 88*) the closing of the Froude Ship Testing Tank at Haslar, Gosport, which had been the longest continuous-serving laboratory in the world, having never closed down since it opened in 1887 (except for repair and reconditioning work). Members who attended the Winchester Conference last September will remember visiting the No.2 tank and the Froude Museum, which contained among other things, some of the original carriage, together with the machine designed by William Froude to draw graph-paper more accurately than was available at that time. Two of his early experimental models and every original notebook belonging to both William and Edmund were also there.

Now, due to the restrictions imposed on the Navy, the museum has closed and the contents given to the Science Museum. The models and all the hardware have gone into store, while the notebooks and all of the written material is now at the Science Museum Library where, hopefully, it will be indexed one day and available for research. What a good job we visited it while we had the opportunity.

Tony Yoward

## IA opportunity in Jordan

The multi-disciplinary research and development Badia Programme, in Jordan's arid north-eastern region, has an industrial history dimension which requires research, potentially up to the level of a Masters disserta-

tion in a university. The programme's field centre at Safawi, some 150 km east of Amman, is within the restored buildings that once comprised 'H5', the fifth pumping station on the IPC oil pipeline from Kirkuk in Iraq to Haifa on the Mediterranean coast. Pumping began in 1934 and stopped in 1948. H5 was built on a grand imperial style, with buildings built to last. These include a fort which might be restored as a Visitor Centre, to contain displays explaining the arid land biodiversity of the region and the archaeology of the remarkable basalt terrain. But it could also include a study of H5 itself, together with the history of the pipeline. It is believed that archive material still exists in London at BP where IPC still has an office and still publishes a journal mainly for ex-employees who worked along the pipeline. At H5, the pumping station itself is still intact (as well as the managers' houses) with all the equipment that was transported there from Glasgow and Newark and other UK industrial cities. The pumping station is a fascinating piece of twentieth-century industrial archaeology.

The programme can offer expenses and accommodation at Safawi for a researcher. The leader, Dr Roderic Dutton, would be pleased to hear from anyone who might wish to become involved with this project. He can be contacted at the Centre for Overseas Research and Development, University of Durham, Science Laboratories, South Road, Durham DH1 3LE, ☎ 0191 374 2494.

## Wiltshire canal news

The Kennet & Avon Canal Partnership (British Waterways, Kennet &

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The latest issue, No. 7, available from the 1st September 1995 contains articles on Combe Martin; Early Locomotives at Swanscombe Cement Works; the Automatic Tide Marker Station at Irvine Harbour; the Zillah Shipping Co.; Ramsley Copper Mine, Dartmoor; and the Mills on Artle Beck, Caton, Lancs.

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Avon Canal Trust and local authorities) is seeking £28 million from the Heritage Lottery Fund and other sources to invest in a major capital programme of engineering and environmental works. The project will secure the working condition of the 87-mile canal and will guarantee a self-financing, sustainable future. The fully restored canal will bring considerable social and economic benefits to its many local communities, including, it is envisaged, the creation of up to 1,800 jobs.

Meanwhile, work is underway at the famous Caen Hill flight of locks at Devizes in Wiltshire. This was restored and re-opened in 1990, but has always suffered from inadequate water supply, thus hindering the use of the waterway for boating. Now, the Devizes Locks Backpump Scheme should make this problem a thing of the past. A 3.6 km length of 600 mm diameter pipeline is being laid under the towpath between a new pumping station at Lower Foxhangers and the Top Lock in Devizes, and when completed this will allow precious water to be returned back up through the flight.

### When listing isn't enough

The Channel Tunnel Rail Link Bill, currently in its Commons committee stage, proposes the removal of listed building consent inside the 'limits of deviation' within which the new railway will be built. When the bill is passed the railway builders will have the right to demolish structures, using an abbreviated and limited consultation exercise with the local authority, subject to appeal to an inspector appointed by the Secretaries of State for Environment and Transport (the latter cannot be said to be entirely disinterested in the outcome). The Committee hopes that the issue of individual buildings can be dealt with by negotiation between the promoters and petitioners, and need not be brought before them. The petitioners say that the limits of deviation are too large, and are much greater than the path of the line and its ancillary buildings require. For example, the St Pancras terminus includes part of King's Cross, the Great Northern Hotel, the listed gasholders, St Pancras itself, part of the German Gymnasium and the Stanley Buildings. The demolition of some of these is clearly required to build the line, but not all. But the builders will have a free hand to remove what they wish, whether for operational reasons or not.

This important matter of principle has received relatively little attention,



*Push-tug CH104 negotiates three compartment boats carrying c500 tonnes of coal into the newly opened Lemonroyd Lock on the Aire and Calder Canal, with other barges queuing behind*

*Photo: Justin Slee/British Waterways*

and it is being left up to the King's Cross Conservation Advisory Committee and others such as the Victorian Society to highlight this major defect. And there is a quandary. Should the merits of the various buildings be advanced when it is clear that they may have to be demolished whatever line is built? Or should the issue be that of principle alone, and the value of individual structures not be brought to the attention of the Committee?

The issue of the St Pancras gasholders illustrates how little the promoters are prepared to go out of their way to accommodate modest conservation issues. Whatever line is built, they will have to go. Though Union Railways have commissioned a report from Dorothea Restorations to show that re-siting of the unique Siamese triplet is technically entirely feasible, and at a moderate cost in relation to the whole project, they have agreed no proposals for saving this unique structure. What hope then for the other buildings, most of them listed, within the limits of deviation?

If this bill goes through in its current unacceptable state, it will create a precedent for other promoters to wriggle free from the constraints of listed building consent in

a similar manner. With regard to the Channel Tunnel Bill, the Greater London IA Society has adopted a resolution to condemn this unsatisfactory state of affairs.

*Charles Norrie*

### Lottery win for textile gallery

In the first round of Heritage Lottery Fund grants announced on 26 April, the Museum of Science and Industry in Manchester won a major grant of £400,000 for its new 'Making Textiles' gallery. This new gallery, which opens in December 1996, will focus on Manchester's distinctive role within the textile industry, and will tell the workers' histories over the last two centuries. In addition to local relevance, the gallery's collections and themes are of international significance by virtue of Manchester's world-wide influence on textile manufacture. Manchester's spectacular growth was unprecedented and it has a unique place in history as the world's first industrial city. The textile industry was the foundation of this development.

'Making Textiles' will examine the production of fabric from raw fibre to finished product. Emphasis will also be placed on more recent history and on contemporary design, manufacture and use. It will also examine

the relationship between Britain and the rest of the world in the textile industry.

The new 1,200 square metre gallery will be in the Lower Byrom Street Warehouse, a former railway warehouse which is one of the five buildings making up the museum complex. The Museum of Science and Industry in Manchester has developed at a rapid pace since it opened in 1983. It currently attracts a third of a million visitors each year and emphasis is placed on visitor participation, working exhibits, placing science and industry in a social context and on generating a friendly and welcoming atmosphere.

### First new canal

Future industrial archaeology was made in April when the first major new canal to be built for 90 years was opened on the Aire and Calder Navigation at Allerton Bywater, near Castleford. The new 3km clay-lined and stone-pitched navigation channel is said to be the most comprehensive canal development since works such as the New Junction Canal in 1905, or the Manchester Ship Canal in 1894. The scheme includes the new 4.6m-deep Lemonroyd Lock, two lock keeper's cottages, a weir, marina, three bridges and a major environmental enhancement scheme. The Navigation carries 2.5m tonnes of freight, mainly coal, oil, sand and gravel every year. The new works will allow resumption of operations at the St Aidans open-cast coal site which had come too close to the old courses of the canal and River Aire.

### Papers called

Calls for papers have been received for two mining conferences to be held on minor metals and minerals (November 1995) and on the archaeology of mining in South-West England (April 1996). For contact names, see the Diary page.

### Preserving industrial landscapes

At the end of June a conference was held in Germany under the auspices of the International Committee for the Conservation of the Industrial Heritage (TICCIH) to discuss the preservation of industrial cultural landscapes. The venue was the Duisburg North Landscape Park in the Ruhrgebiet – one of the most ambitious enterprises yet for the preservation of an industrial landscape. This takes in some 200 hectares of almost unaltered 'derelict' industrial land, centred on the former Meidrich Steelworks which closed in 1985. It is now open to the public to use for

*continued overleaf*

*continued from previous page*

picnics, concerts, climbing, meetings and receptions, or just to wander over and explore.

The conference was organised by the International Building Exhibition Emscher Park, which has been a major partner in the Duisburg Landscape Park and several other important and imaginative conservation schemes in the Ruhrgebiet. Delegates attended from throughout Europe and from North America, and there was an opportunity to exchange information about initiatives in the conservation of industrial landscapes in different countries. Professor Tim Putnam of Middlesex University discussed interest in landscape preservation in Britain and stressed the need for co-operation between groups and agencies if we are to preserve the character of not just isolated monuments but the spaces between them. From other countries, many concepts were introduced, such as landscape parks, heritage corridors, national parks, listing and landscape registration, and adaptive re-use of large complexes. Above all, the importance was stressed of educating and persuading the public and local politicians about the value of our rapidly disappearing industrial landscapes.

*Peter Wakelin*

## SIAS on fire

In late June the old town mill adjacent to the Blake Museum in Bridgewater was severely damaged by arson. Unfortunately, along with it went artefacts collected over many years by the Somerset Industrial Archaeological Society and held in store awaiting future display. Such material included old patterns from local iron foundries.

## News from TICCIH

The International Committee for the Conservation of the Industrial Heritage reports that the ironworks at Volklingen in the Saarland has been

enrolled on the list of UNESCO World Heritage Sites. Built between 1883 and 1916 and modernised on several occasions, the complex contains six blast furnaces with their attendant blowing engine hall, coke ovens, sinter plant, Cowper stoves, conveyor system and ore-preparation plant. The campaign to preserve the site included televised rock concerts from the vast blowing engine hall.

The news from Volklingen is another significant landmark in the growing appreciation of industrial heritage in Germany, following the designation of the mining settlement of Rammelsberg in 1993. The first moves to accord legislative protection to industrial monuments in Germany were made in North Rhine-Westphalia in 1973-74. There are now five conservators concerned with industrial monuments in North Rhine-Westphalia, and six specialists in other parts of Germany.

In a wider sense the designation of Volklingen marks a growing acknowledgement of the significance of twentieth-century industrial monuments. It is the first site to be designated which is primarily of twentieth-century significance. The ironworks is a place of great significance in twentieth-century civilisation, yet it cannot be assessed by the criteria used for evaluating temples or palaces. The designation also marks a move away from the 'monumental' approach to World Heritage Sites, in line with the spirit of the resolutions of the Conference on Authenticity held last November in Nara, Japan, at which Dr Barrie Trinder of the Ironbridge Institute presented a short paper on authenticity in relation to the industrial heritage. The conference proceedings will be published during 1995.

## Changing names in Sheffield

The Sheffield Trades Historical Soci-

ety, founded in 1933 and thought to be the oldest local society for industrial history and industrial preservation, has changed its name to the South Yorkshire Industrial History Society (SYIHS).

The Society had its origins in the Sheffield Trades Technical Society (STTS), initiated by Dr William Ripper, Professor of Engineering at the University of Sheffield, in 1918. This was a venture in adult technical education, offering a forum and a link to the university for both managers and workers in Sheffield's traditional trades such as cutlery, hand tool making, and rolling and forging. The STTS set up a committee in 1932 to preserve suitable tools and equipment and look into setting up a museum in some of the old water-powered cutlery grinding wheels, and this joined forces with the Cutlers' Company to launch the Society for the Preservation of Old Sheffield Tools and Machinery.

The first meeting was held on 30 October 1933 and chaired by a former Master Cutler, David Flather, who became the first president (his grandson, David W Flather, opened the Society's Diamond Jubilee Exhibition at Sheffield Industrial Museum). Others present included the Lord Mayor elect and Harry Brearley, the inventor of stainless steel.

The words 'and machinery' were dropped from the Society's title in 1934, and in 1949 it became the Sheffield Trades Historical Society. In the 1930s, it organised demonstrations of cutlery grinding at Shepherd Wheel, and began the long and difficult campaign which led to the restoration of Abbeydale Industrial Hamlet and its opening as a museum by Sheffield City Council in 1970. The Society saved the tilt hammers at Wortley Top Forge from being scrapped in 1942, bought the Forge for £600 in 1953 and began its restoration which since 1976 has been continued by the South Yorkshire Trades Historical Trust in association with the Society. It also owns

the iron furnace of c1700 and the Newcomen engine house at Rockley, and is working with Sheffield City Council and others to safeguard the unique large crucible steel casting shop at Wilfrid Road, Darnall, Sheffield.

Wortley and Rockley are both in Barnsley borough, and the Society has increasingly concerned itself with the industrial history of South Yorkshire as a whole (the local authority areas of Barnsley, Doncaster, Sheffield and Rotherham). The 'Sheffield' name has given a wrong impression as the Society has become more involved in recording and research, planning and conservation matters, and events such as local history fairs, throughout South Yorkshire, and this has led to the decision to change its name.

The SYIHS offers a programme of winter lectures in Sheffield, and summer visits. Two lectures in Barnsley last winter were well attended, and they are likely to become a regular feature. It hoped to develop support and activities in Doncaster and Rotherham, possibly in partnership with local bodies. The annual magazine *The Cutting Edge* is to be joined by a Journal for more substantial historical articles, and their remits will cover the whole of South Yorkshire. This September, the SYIHS, with the University of Sheffield's Division of Adult Continuing Education, is welcoming the 1995 AIA Conference to Sheffield.

The SYIHS hopes that this growing range of activities will encourage more people to join it. For details of membership, please contact the Hon Treasurer, Mrs P D Lambe, 39 Low Road, Sheffield S6 5FY; and for other enquiries the Hon Secretary, Mr M H McQuaid, 61 Pringle Road, Sheffield S7 2LL

*Derek Bayliss*

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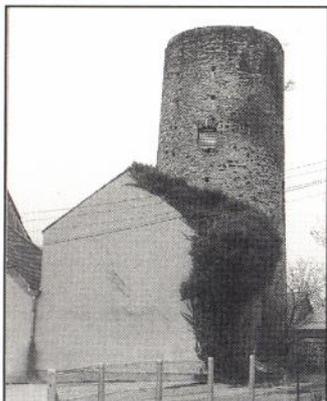
## West of England

An eye for paradox is valuable in any assessment of the current state of IA in the West of England – while there is much to be pleased about, there are many causes for concern.

Within the Bristol Industrial Archaeology Society (BIAS) area, currently the County of Avon, there is much good news on the conservation front. Restoration is now well under way at the important Salford Brass Mill with support from the Avon Industrial Buildings Trust (AIBT), the county, the district and parish councils and English Heritage. The shell of the building is being restored in conjunction with a programme of archaeological survey and recording. This has been a lengthy project – AIBT was formed some thirteen years ago with the initial aim of restoration here.

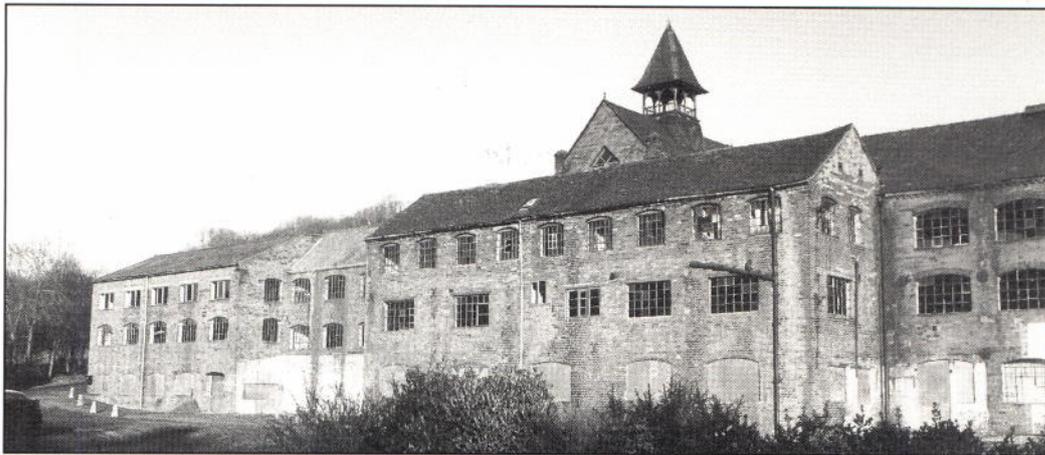
In the cities, Cleveland Bridge in Bath (1827) has been tastefully restored and current plans for the future development of much of Bristol's Floating Harbour (now 'Harbourside') are in line with many of the ideas that BIAS put forward in the late 1960s. In this area, the buildings and distinctive chimney of the former Rowe Bros City Lead-works, one of only a few such buildings to survive in the UK, is currently in progress.

On the other hand, there are few grounds for complacency. Within 'Harbourside' there is concern for some of the surviving industrial buildings. Whilst it is intended to keep the early ferro-concrete structure of the Canon's Marsh Goods Shed (see *IA News* 91), the fate of the associated iron extension is in the balance. Also at risk are the distinctive and impressive remains at



The windmill tower at the Warmley Works, Bristol, established in 1746 by William Champion to exploit his patent for the production of metallic zinc. By 1761 a windmill was in use for crushing ores. This large and important site is now in the hands of Kingswood Council and a local trust plans to develop a museum here.

Photo: Jessica Lawrence



The John Rose Building at Coalport is soon to be restored after years of dereliction

Photo: Ironbridge Gorge Museum Trust

the former Canon's Marsh Gas-works, established in 1823.

Whilst Cleveland Bridge has been restored, James Dredge's historic Victoria suspension bridge in Bath has been vandalised and awaits repair. A major source of controversy in this city is the extent of safety works to be carried out at the Combe Down stone mines. Stabilisation in areas threatened with collapse is clearly necessary, but there is argument and debate over the degree of infill necessary and the materials to be used. BIAS supports a minimalist option which will limit loss of areas of archaeological and geological significance in the largest underground stone mines of their age in the UK.

Another positive development is the introduction of the BIAS Brunel Prize for work on the IA of the region. The sum of £150 will be made available for the first award in 1997 – the deadline for submissions is 31 August 1996. BIAS gratefully acknowledges receipt of the funds of the now-defunct Brunel Society which will be invested to generate income for a prize that will provide an incentive for research.

Mike Bone

## East Anglia

A brief report this year. In June, a successful EERIAC 5 was held at Barnham, near Thetford. Forty-seven delegates attended and thus ensured EERIAC will continue. In Cambridgeshire, the Stretham Engine Trust has put the building in good repair, and is installing electric power to enable the engine to be demonstrated in motion. Additionally, the replacement Mirlees diesel is on view. The trust has also taken over the adjacent stokers' cottages. Cheddars Lane pumping station has had its roof and lantern repaired, and has recently acquired from Chivers at Histon a heavy duty three-throw effluent pump made by the local firm of Charles Lack of Cotten-

ham. In Suffolk, it seems likely that the flash lock converted to a turfsided pound lock at Mildenhall will be preserved and restored by the NRA. On the Gipping Navigation, Bosmere lock has been restored largely by volunteers. In Norfolk, the surveys of all the county's bridges and of defence structures from both World Wars continue, the latter nearly complete. However, there is still much concern about the future of Colman's mustard works. The only known news from Essex is the sad loss by fire of the fine Mistley No.7 maltings.

David Alderton

## West Midlands

Heritage Lottery Funding is now just starting to percolate through to museum projects, and the Ironbridge Gorge Museum Trust has been one of the first successful applicants in the region, having been awarded £400,000 towards a major scheme at Coalport. The Museum will be renovating, in a scheme involving partnership with English Heritage and others, the block which has become known as the John Rose Building. This is the range of workshops with the bell-tower located between the road and the existing Coalport China Museum, which in-

cludes some of the oldest surviving structures on the entire site. The complex was acquired by the Museum Trust some years ago, to save it from being developed in an unsympathetic way, but until the recently-announced award was made, funding for restoration had proved elusive. Meanwhile, the empty buildings have detracted from the approach to the Museum, particularly when an arsonist destroyed the bell-tower (since repaired). Conversion will include study-bedroom accommodation for the YHA, training workshops and refreshment facilities for visitors to the China Museum, and work will be well under way when Coalport celebrates its bicentenary in 1996.

Other recent developments at Ironbridge include the opening of the refurbished Museum of Iron in May, whilst Dale House – built for Abraham Darby I and completed just after his death in 1717 – is accessible in a partly-restored state for the first time in 1995. Blists Hill is enjoying its first full season with new entrance and associated facilities, and work proceeds on the brick-works east of the canal which will be accessible to visitors from 1996.

John Powell



## Heritage Engineering (UK) Ltd.

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**8 September 1995****IA RESEARCH SEMINAR**

pre-AIA conference seminar in Sheffield. Details from Dr Marilyn Palmer, Department of History, The University, Leicester LE1 7RH.

**8-13 September 1995****AIA ANNUAL CONFERENCE 1995**

in Sheffield. Details of full programme from David Alderton, 48 Quay Street, Halesworth, Suffolk IP19 8EY.

**11-15 September 1995  
MUSEUMS ASSOCIATION  
ANNUAL CONFERENCE**

at the University of Leicester. Details from the Museums Association, 42 Clerkenwell Close, London EC1R 0PA, ☎ 0171 250 1836, FAX 0171 250 1929.

**13-18 September 1995  
THE PREHISTORY OF MINING  
AND METALLURGY**

a joint conference of the British Museum and Early Mines Research Group in London and Bangor. Contact P T Craddock, Department of Scientific Research, British Museum, London WC1B 3DG. ☎ 0171 323 8797, FAX 0171 323 8276.

**16 September 1995  
CONSERVING EUROPE'S  
INDUSTRIAL HERITAGE:  
CONTEXT, CONTINUITY AND  
CHANGE**

one-day industrial forum, part of the Europa Nostra meetings, at the Palace Hotel, Oxford Road, Manchester. Details from Europa Nostra, Lange Voorhout 35, 2514 EC, The Hague, The Netherlands.

**22-24 September 1995  
HISTORIC FARM BUILDINGS  
GROUP CONFERENCE**

based at Withersdane Hall, Wye College, near Ashford, Kent. Details from Jane Wade, c/o Sell Wade Postins, 17 Daleham Mews, London NW3 5DB.

**23 September 1995  
THE INDUSTRIAL HERITAGE OF  
ESSEX**

one-day conference at the Medieval barns, Cressing Temple, Essex. Further details from Shane Gould, Planning Department, Essex County Council, County Hall, Chelmsford, Essex CM1 1LF, ☎ 01245 437638.

**4-7 October 1995  
PRESERVATION OF THE  
INDUSTRIAL HERITAGE —  
GDANSK OUTLOOK II**

at Gdansk, Poland. Details from Waldemar Affelt, Politechnika Gdanska, Wydział Budownictwa Ladowego, ul Gabriela Narutowicza 11/12, PL-80952, Gdansk, Poland.

**14 October 1995  
EMIAIC 50**

at Loughborough University, to celebrate 25 years of IA in the East Midlands, with prominent speakers. Details from Michael Bannister, 78 Burnside Drive, Nottingham.

**14 October 1995  
THIRD NATIONAL ROAD  
TRANSPORT HISTORY  
SYMPOSIUM**

on the theme of the early omnibus, at the National Motor Museum, Beaulieu. Details: Teresa Godwin, The Library, National Motor Museum, Beaulieu, Brockenhurst, Hampshire SO42 7ZN

**21 October 1995  
INDUSTRIAL ARCHAEOLOGY  
OF DORSET**

dayschool at County Record Office, Dorchester, on IA of a rural county. Details from Claire Pinder, SMR Officer, Planning Department, County Hall, Dorchester DT1 1XJ ☎ 01305 224921.

**21-28 October 1995  
MILLS OF CRETE TOUR**

tour of over 60 wind and water mills amongst some of the finest scenery in Europe. Contact Alan Gifford, 4 Old Hall Drive, Willington, Derby DE65 6DT ☎ 01283 702299.

**8 November 1995  
TRADE AND THE PORT OF  
CHESTER**

day conference on trade from the Iron Age to nineteenth century. Details from Jane Hebblewhite, Chester City Council Archaeological Service, The Grosvenor Museum, 27 Grosvenor Street, Chester CH1 2DD, ☎ 01244 321616.

**18-19 November 1995  
HISTORY OF MINOR METALS  
AND MINERALS CONFERENCE**

at the Peak District Mining Museum. For details or submission of papers, contact Evelyn Dixon, Peak District Mining Museum, Matlock Bath, Derbyshire DE4 3NR, ☎ 01773 823020.

**5 December 1995  
INDUSTRIAL ARCHAEOLOGY**

National Trust Centenary lecture by Sir Neil Cossons, at the Science Museum. Tickets from Autumn Lecture Series, National Trust (Enterprises) Ltd, 36 Queen Anne's Gate, London SW1H 9AS.

**12-14 April 1996  
THE ARCHAEOLOGY OF MINING  
IN SOUTH-WEST ENGLAND**

conference sponsored by the Historical Metallurgy Society and the Peak District Mines Historical Society. For details or submission of papers, contact Phil Newman, c/o RCHME, Rose Duryard, Lower Argyll Road, Exeter EX4 4PB.

**Summer 1996  
AIA VISIT TO POLAND**

advance notice only. Details to follow when plans finalised.

*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.*



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*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 and research 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. Further details may be obtained from the Membership Secretary, Association for Industrial Archaeology, The Wharfage, Ironbridge, Telford, Shropshire, TF8 7AW, England ☎ 01952 433522.*

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

**REGIONAL CORRESPONDENTS****Region 1: SCOTLAND**

Dr Miles Oglethorpe, Royal Commission on the Ancient and Historical Monuments of Scotland, John Sinclair House, 16 Bernard Terrace, Edinburgh EH8 9NX

**Region 2: IRELAND**

Michael Coulter, Department of Environment, Historic Monuments and Buildings, 533 Hill Street, Belfast 1

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Stephen Greuter, 17 Llys Daniel Owen, Orchard Way, Mold, Clwyd

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John Powell, Ironbridge Gorge Museum Trust, The Wharfage, Ironbridge, Telford, Shropshire TF8 7AW

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Derbyshire, Nottinghamshire, Lincolnshire, Leicestershire and Northamptonshire

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Devon and Cornwall  
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