

INDUSTRIAL ARCHAEOLOGY NEWS

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THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

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INDUSTRIAL ARCHAEOLOGY NEWS 122 Autumn 2002

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COVER PICTURE

Vanishing species: dockside cranes at Liverpool Docks in 1975, one of the subjects of this year's Ironbridge Weekend (see page 4)

Photo: Peter Stanier

Llythyrdy Smithy, Pentrebach, Powys

In October 2001 a contracted archaeological desk-top study, photographic recording and building survey was undertaken on the site of a former village smithy which to be converted for domestic use. Cartographic evidence showed a building occupying the site of the smithy in 1819, which is shown clearly as a three-compartment building in 1905. The dry stone walled structure suggests a possible eighteenth century origin. The smithy is a rare example of small rural industry and includes a forge hearth that has been left untouched since it went out of use in the latter half of the twentieth century.

Pat Frost

The smithy is located in the centre of the small settlement of Pentrebach (SN 90883303) about 4.3km north of Sennybridge. The settlement developed on the confluence of Nant yr Eithrin and the Afon Cilieni, which flow south to meet the River Usk, surrounded by agricultural and pastoral lands and small woods. The smithy occupies a roadside position south of a converted corn mill and north of an inn which has undergone several name changes since it was constructed as The Railway Tavern in the 1860s as a hostelry for railway navvies. The inn was primarily the home of a shoemaker, and renamed The Shoemaker's Arms (Tafarn y Crydd).

Corn mills, smithies and inns were an essential part of every rural community. The traditional method of heating iron on a hearth blown by bellows has changed little since medieval times and many post-medieval smithy structures overlie their medieval predecessors. While the size of smithies may have increased, the basic tools such as hammer, tongs, bellows and anvil remain the same. There was a general increase in ironworking during the eighteenth century and the production centres of Merthyr Tydfil and Blaenavon presumably supplied blacksmiths north of the county with bars of iron.

The 1819 Ordnance Survey drawing by Robert Dawson records the village and despite the map's small scale, the corn mill is clearly seen and further south a rectangular building fronts the west side of the road with a second building west of it. The roadside building is on the site of the present smithy and the building to the west appears to be the part stone-walled structure that has been converted into a garage on the property now named Llythydy. The buildings are recorded consistently on subsequent OS maps. On the 2nd edition 25-inch OS map of 1905 the current smithy is shown as the northernmost compartment of a terrace of three, with an addition on the south east side and a small square structure on its west boundary, presumably a privvie.

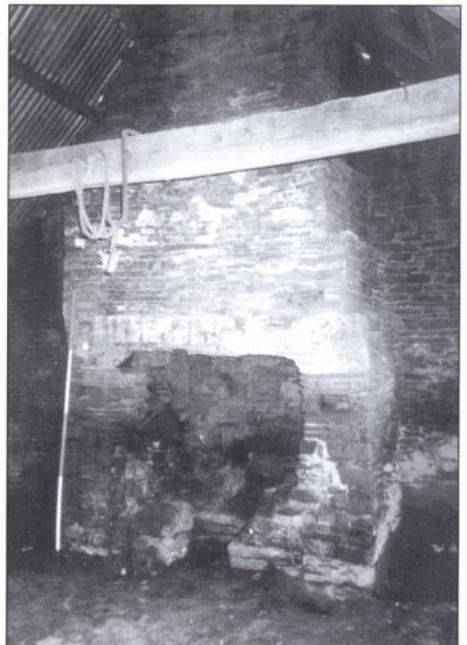
The village of Pentrebach is excluded from tithes as recorded on the 1839 Tithe Map and apportionment for the Parish of Llandilo-Fan. Examination of maps and papers deposited as part of Aberllech Estate and lands that were part

of the D.T.M. Jones estate in the area of Pentrebach have so far failed to link the smithy with either estate. Aberllech manor house was built in 1780 and the date appears to tie in with the corn mill and smithy buildings.

A thriving community appears to have developed at Pentrebach during the mid-nineteenth century. During the 1860s the Neath & Brecon Railway Co. began to construct a line north and south of Pentrebach, but it was never completed and the abandoned earthworks can still be seen. The Railway Inn was built and became a traditional meeting place for the local hunt. The Squire at Aberllech had his own pack of hounds and there was a hunt at Sennybridge in the early twentieth century which also met at the inn. The single door in the Pentrebach smithy infers that shoeing of horses took place on the roadside forecourt area set aside for this use.

The smithy forms a single storey building measuring 6.9m by 6m wide externally, fronting the west side of the road. The north and south gables rise to c5m at the apex and the walls are 0.6m thick on all sides. The building is constructed of irregularly coursed and unmortared local linear-bedded sandstone. The fabric shows signs of past lime wash and more recent patches of concrete rendered repair work. The east and west long walls stand c2m above the external ground level, but the floor level inside is 0.4m lower because the road has been raised.

The current roof is covered with corrugated iron sheets, but a former stone tiled roof is suggested by finds on the site of two sandstone roof tiles with nail holes. The roof is supported by a central through purlin tie beam truss with collar beam constructed in oak. Joiner's marks in the form of three parallel lines were located on the



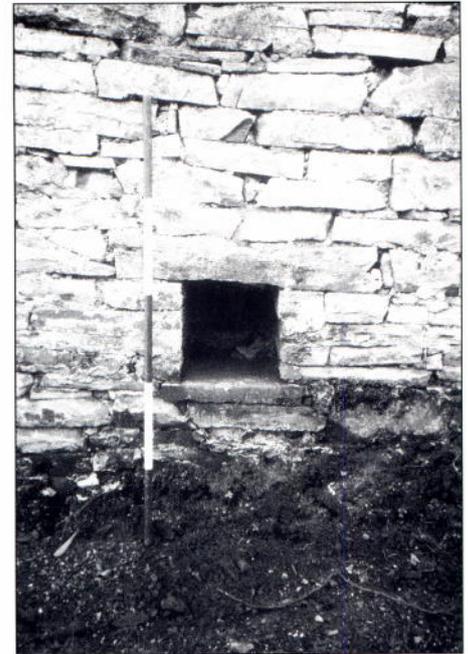
Blacksmith's forge adjoining the north gable. The tie beam can be seen occupying a central position. The dark patch on the floor to the right of the forge may indicate the location of a hoist

Photo: Pat Frost



The roadside smithy, viewed from the north-east, beneath a corrugated roof

Photo: Pat Frost



The opening in the north gable to allow long lengths of ironwork to be placed in the hearth. Scale: 1m

Photo: Pat Frost



The cobbled floor. Scale: 1m

Photo: Pat Frost

west side of the collar beam and adjoining rafter. Pairs of wooden pegs affix the collar beam to the rafter and secure the head of the 'A'-frame. The roof lies on three purlins supporting rafters, which remain on the east side only.

The building is of simple construction, similar to local smithies that existed at Defynnog and Llandeilo-Fan, and appears to have fallen into disrepair since it went out of use in the 1950s. The removal of the south side of the structure sometime after 1948 has weakened the south corners and the stonework has fractured on both sides. The lower courses on the east side of the south gable show evidence of keyed-in stonework, the remains of the rectangular terrace of three recorded since 1819. The irregular stonework on the corresponding west side also suggested some repair work.

The forge hearth is built against the internal north gable wall and an opening 0.3m square at the base of the wall presumably gave access to the hearth for long lengths of ironwork. The hearth and stepped chimney rise to c5m above the floor level. The open hearth c1.4m wide is located below an oak lintel measuring up to 2.47m long and 0.42 high.

The hearth appears to have used two bellows to create the air draught essential to bring the fire up to sufficient temperature for ironworking. The openings for blast pipes from the bellows can be seen in the east and west sides of the hearth. The internal east wall includes a recess 1.1m high and 1m wide located opposite the opening in the chimney east wall, presumably to accommodate bellows. At a similar location on the internal west wall an amorphous-shaped area of cement

rendered patchwork may be the filled-in recess for a second bellows. The location of the hearth and the small windows comply with the fact that traditionally blacksmiths could test the heat of the fire by the colour of the glow, made easier by lack of direct sunlight.

Clearance of soil and ash revealed an irregular cobblestone surface which appears to extend over the entire floor area. The floor is composed of waterworn smooth cobbles with intermittent square and rectangular stones. In front of the hearth on the east side an irregular shaped filled in hole may indicate the location of a hoist. There was no evidence to suggest the site of the anvil or the water trough for cooling metals and tools.

The south internal gable wall includes three recesses c18cm x 12cm that may have secured joists for a possible loft or storage area. The recesses are level with each other but not with the tie beam. There is no evidence to suggest how a floor was secured or how far it extended into the smithy. The location of the recesses and the aperture 0.5 x 0.12m below a timber lintel may indicate a former staircase to the loft above.

Since the building fell out of use as a smithy, it has been used for coal and general storage. The building was subsequently cleared out and no artefacts relating to the smithy remained. The photographic record and building survey have ensured that a record has been made of the smithy prior to its change of use. The owners of the property intend to retain the stone chimney and hearth following necessary consolidation work and to retain the character of the smithy as far as is possible within the constraints of modern planning regulations.

Ironbridge weekend: the modification of port structures

This year's weekend broke new ground in taking a particular aspect of IA as the theme, unlike earlier weekends. It might be a specific theme, but the modification of port structures is itself a huge topic since Britain has, or had, so many ports, each evolving in a different manner.

Ray Riley

There is no better person than Edwin Course, who has spent his life researching transport, to tackle the overview of change; this he did in his inimitable style, offering a lengthy introduction concerning his boyhood familiarity with London docks as his father was promoted within the dock authority. Having referred to the impact of jet travel on liners, and of container vessels on conventional ships and traditional quays and warehouses. Dr Course illustrated the variety of change by showing what has taken place in five ports: Portreath and Newquay in Cornwall, Bideford, Seaham Harbour and Southampton. All have undergone substantial negative change, no more than Southampton where only one of the seven dry docks survives, the transit sheds, warehouses and ocean terminal have all been demolished, and retailing has emerged in part replacement. Meanwhile a vast container terminal has been built, unusually, on the upstream side of the old port.

Being a planner by profession, Bob Jones emphasised how the Bristol dock area has been regenerated and transformed in the last decade by a series of large property developments. Arguing that planners and developers do not always share the same views of value, Bob demonstrated how the extensive Courage brewery, the leadworks, the bonded warehouse and the gasworks sites have been developed. The transit sheds are now an industrial museum, several restaurants have opened, one in the former seed warehouse, an arts centre has been established, while a tobacco warehouse has been taken over by the Record Office and the City Valuer's Department. Affordable housing is also found in Bristol's inner city, thriving after years of neglect.

Given the demand for building land close to the centre of London, it is not surprising that demolition and dock infilling have occurred relatively quickly after the demise of port functions. As Dr Bob Carr pointed out, multi-storey buildings were being constructed in dockland in the 1980s. It is difficult and costly to build tall structures in infilled docks, but this did not prevent the emergence of very high buildings at Canary Wharf on the Isle of Dogs; some of these reach a height of 800ft, the floor space thus available being justified by the completion of the Jubilee Line. Some warehousing has been converted, even if nothing of the original St Katherine's Dock survives; sometimes the impact of conversion is reduced by proximity to overpowering high-rise blocks.

These were changes at a general scale but much more specifically Bob offered an interesting typology of vulnerability, beginning with structures most likely to be demolished: 1. Roads and quay surfaces, 2. Cranes and hydraulic rams, 3. Dock and associated buildings, 4. Dock basins, 5. Dry docks, which were so massively built that it is now considered economic only to remove the top 5ft of the walls.

Tony Parkes talked about changes in canal ports. Assisted by British Waterways staff, including Jonathan Briggs who was on hand with visual aids, Tony had scoured the archives to find old photographs to illustrate the historic appearance of many of the sites he described. Inevitably much has gone, but owing to the low level of demand for land in rural areas, the pace of change does not quite match that of London. Tollhouses and managers' houses are still residences, some ports have become museums such as Ellesmere Port and Stoke Bruern, while tourism justifies the maintenance of such engineering feats as the Pontcysyllte aqueduct. There are even plans to build a 160-boat marina on the Trent & Mersey Canal. It seems that negative change in the canal ports at least has ceased.

The Saturday afternoon field trip was announced as a leisurely two-hour ramble around canals, inclines and other industrial sites in the vicinity of Coalbrookdale and Lightmoor. The leader was Ken Jones, member of the Friends of the Ironbridge Gorge Museum. Towards the end of the walk local resident Charlie Boyce kindly showed the group recent excavations in his garden revealing parts of the former tunnel and shaft system by which goods were raised and

lowered between the Shropshire canal and the Coalbrookdale Works. The group then descended the slope of the inclined plane which later replaced the tunnel and shaft system. It was certainly interesting, and probably leisurely, but after three hours and some distinctly steep and slippery slopes, your correspondent was pleased to note that a good many others were also in a state of collapse! The weekend dinner was held at the New Inn at Blists Hill, and was capped by a game of call my bluff, concocted by David Alderton, who as one would expect, produced a series of highly improbable definitions, so scored owed more to a game of battleships than to logic (with all due respect to the winners of course).

The Sunday session was kicked off by Ray Riley who considered the naval ports of Chatham, Sheerness, Portsmouth, Devonport and Pembroke Dock. He argued that compared with the commercial ports, naval ports had undergone relatively small modification because of the policy of expanding on new ground and retaining old structures, and because the quality of many buildings caused them to be listed. Furthermore, the dockyards were not subject to commercial forces. At Chatham, use by the tourist industry has helped to maintain some important structures. Ray then gave examples of modification at each of the five ports within a five-point typology: 1. Losses, including cranes, covered building slips (Portsmouth), dock infilling (Sheerness) and storehouses. 2. Survival but no use: covered slips (Devonport), building slips (Pembroke Dock), block mills (Portsmouth), and boathouses (Sheerness). 3. Survival without change of use: Chatham ropery. 4. Survival with change of use: The Factory (Portsmouth). 5.



Saturday afternoon interlude: the Ironbridge Weekend party outside the company stables, one of the few surviving pieces of evidence of the Lightmoor Furnaces

Photo: John Powell

Survival and adaptive re-use by the private sector, of which there are many examples at Chatham, including the fine Present Use Store by the University of Greenwich.

Introducing the northern ports, Fred Brook remarked that at various points in time some of the country's greatest ports were located in the north, especially during the era of coal exporting to the rest of the world. But much has changed: Preston docks have gone and the only ship at Newcastle is a floating nightclub. To demonstrate specific change Fred selected a number of small ports, all of which have radically contracted. Seaton Sluice, like Blyth, expanded as a result of the coal trade, and is now home to pleasure craft and a few fishing boats. Port Carlisle was a short-lived affair, opening in 1823, but killed off by the railway, leaving little evidence of its presence. Silloth was opened in the 1850s as an alternative to Port Carlisle and, thanks to the need for flour by Carrs biscuit factory, it still operates as a port.

The final session was taken by Dr Adrian Jarvis, who is co-director of the Centre for Port and Maritime History at the Merseyside Maritime Museum. He began by emphasising the importance of change in dock structures following shifts in the balance between the size of ship, the associated quayside and warehouse space, and technology. Thus multi-storey brick warehouses were replaced by transit sheds, and as ship size rose two storey sheds serviced by level-luffing cranes were introduced. But forklift trucks cannot be used in multi-storey structures, which became superfluous. The advent of the container ship rendered warehousing of any sort redundant, the demand being for large open areas for container marshalling. Yet some container berths built in the 1980s are now



Ray Riley shepherds his followers on an excursion at the restored plateway bridge over the western branch of the Shropshire Canal near Little Dawley
Photo: John Powell

themselves redundant, as some coastal container ships are as large as 40,000 tonnes. Freight traffic at Liverpool has never been higher, but it is highly concentrated in the Seaforth container terminal, dockworkers have almost entirely gone, and the host of supporting activities that used to line the landside of the docks have disappeared. Large areas are derelict, but the area around Albert Dock has seen the emergence of new uses: an art gallery, museum, retailing, offices and residential.

There are similarities here with London although the scale is smaller.

Manchester Docks were the subject of a short member's contribution by Derek Brumhead, who described their complete transition to a cultural, leisure and residential complex.

There may have been no time for discussion, but the experiment of a themed weekend seemed to have met with general approval, sufficient to justify a further foray in this direction.

INDUSTRIAL ARCHAEOLOGY AT IRONBRIDGE

As anyone working within the Industrial Archaeology sector will know, the current emphasis on regeneration of urban, and for that matter rural, environments is leading to an increasing loss of the industrial heritage. At the same time, our industrial past is increasingly perceived as being important in establishing identity and invoking a sense of place. Understanding, and managing the industrial past, is thus becoming ever more relevant to archaeologists, yet the study of industrial remains often calls for additional skills and training needs that are rarely encompassed in conventional archaeology courses.

At the Ironbridge Institute, we have been specialising for the past 20 years in providing robust, vocational courses grounded in the realities of working in Industrial Archaeology. Our aim is to provide a thorough grounding in the impact of industrialisation in modern societies, and an understanding in the numerous skills and techniques necessary for recording, appreciating and managing industrial archaeology. Using the complex archaeology of Ironbridge, Shropshire and numerous sites in the West Midlands, the **MA or Postgraduate Diploma in Industrial Archaeology** can be studied at Ironbridge in one year as four three-week modules, or part time in any combination wished.

For further details visit our web site at www.bham.ac.uk/ironbridge or contact the Administrator, Janice Fletcher, or the Academic Director, Dr Roger White on 01952 432751.

Due to a recent award from English Heritage we may be able to offer a bursary to existing practitioners of Industrial Archaeology. Contact details as above.

Conservation of the Smethwick and Hull Engines

Between May 2000 and September 2001 two very important steam engines produced at either end of Boulton & Watt's highly successful manufacturing partnership were conserved, relocated and animated. The Smethwick Engine is the world's oldest working steam engine and was manufactured in 1778. The Hull Engine was one of the last produced at the Boulton & Watt Soho works prior to closure. The project was undertaken by Heritage Engineering and was commissioned by 'Thinktank Trust', formerly Birmingham Museum of Science and Industry, as part of the Millennium Point development at Digbeth, Birmingham.

Iain Wyper

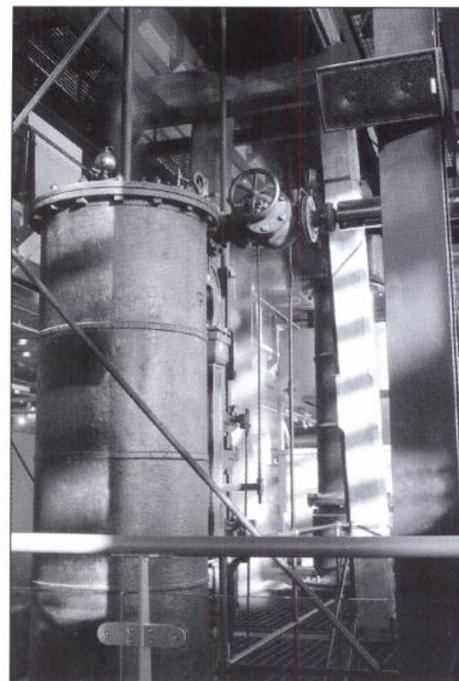
The Smethwick Engine is a substantial house beam engine built in 1778/9 to the design of James Watt by the Birmingham Canal Co. This design of water supply engine relied on the engine house to support the main components of the engine including an upper floor and main beam bearing support with timbers spanning the length and breadth of the engine house. The engine started work in May 1779 and was the first engine to operate with what became the standard three-valve system for efficient expansive operation.

Watt tested the engine in June 1779 and the test results are preserved in the Boulton & Watt Archives in Central Library. The engine is also exceptional in that complete costs have been generated by research, possibly a unique piece of

data for an eighteenth century engine. It cost £1,500 for the engine and engine house with a further £500 for the foundations and related civil engineering works, which conveyed water from canal to pump and back to the higher level of the canal.

The engine worked until 1891, with substantial rebuilds in 1790 (when the outlet was lowered and the pump changed), 1804 and 1853, yet retained the original design layout, timber beam and pumping arrangements. It was relocated to Tipton for preservation in 1897 and, probably to reduce the cost of rebuilding, the condenser and its tank were raised by about 3 metres relative to the rest of the engine.

The engine was steamed to commemorate the centenary of James Watt's death in 1919, but at Tipton and probably using a portable unit to raise steam. The engine was moved to Birmingham in 1959 when the canal depot was cleared for redevelopment and the engine was presented to Birmingham Museums by British Waterways. The engine was re-erected at the Birmingham Museum of Science & Industry in Newhall Street where progress was very slow because of lack of funds but also grand schemes for rebuilding the museum on that site. The engine was slowly rebuilt with odd grants and revenue funding and was steamed in its bicentenary year of 1979. A new building was then built over the engine and the public could see it in steam on several days each month from 1983 to 1997. It had been rebuilt on the same arrangements as at Tipton which was one reason



The Smethwick Engine Photo: Heritage Engineering

for the engine's poor operation on steam.

The move to Thinktank was an opportunity to return the engine to its original layout, to carry out comprehensive conservation and to seek a means of animating the engine which would allow it to be seen in operation every day with minimal risk to the structure of the engine which includes the original timber beam. The brief also

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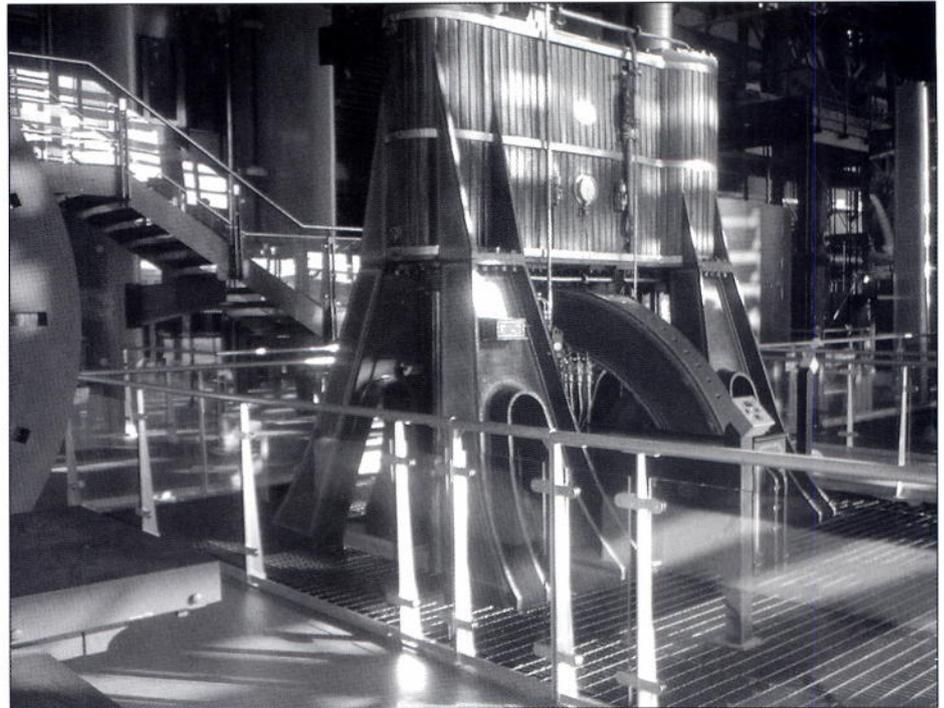
called for the engine to be capable of operation under steam so that it would remain the world's oldest working steam engine.

The relocation, conservation, animation and associated engineering works involved:

- A measured survey to determine alterations required to restore the condenser tank and water pump to their correct locations and to provide a new reservoir to enable the pump to be accessed for future assessment.
- Information provided to enable construction of suitably sized plinths and a new supporting structure.
- The engine was dismantled, extricated from the building around it, packed, transported and re-assembled at its new location. In all, some 50 tonnes of components were moved.
- Prior to re-assembly all components were assessed and conservation work was carried out on the 220-year-old timber beams to prevent splitting and to tighten the main beam and arch heads.
- Damaged timber was replaced, in particular the air pump arch head which had crumbled.
- A new condenser tank was fitted and conservation work carried out on the air pump, steam cylinder and water pumps.
- The condenser tank was fitted in its original position.
- A new cold water circulating system and hotwell discharge arrangement was provided and interfaced with the Building Management System.
- Components were assessed and conserved in a fashion suitable for running the engine in steam.
- A suitable highly controllable hydraulic system was developed for animating the engine.
- The engine was commissioned in steam and on hydraulic animation while monitoring all components.

The Hull Engine was manufactured in 1883 and is also a pumping engine, this time used for pumping sewage out to sea to avoid sewer flooding during high tide. This condensing engine is of the inverted vertical cross compound type and had a bucket pump fitted below each cylinder. Each pump was driven from a crosshead, driven by long con rods connected to the crank. The high pressure valve was of the Rookes internal cut-off type with hand variation of the admission.

The engine ceased working in 1957 and was subsequently dismantled and stored. This is the first time the engine has been on public display since being de-commissioned. The engine was reassembled from the jigsaw of parts and without reliance on drawings. During reassembly, the opportunity was taken to conserve many components and, since it was intended to animate the engine, cylinders were lined with PTFE to avoid wear.

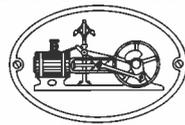


The Hull Engine

Photo: Heritage Engineering

Animation was achieved using a Programmable Logic Controller and an inverter drive. The drive was mounted below the engine acting on the flywheel via a reduction gearbox and tyre drive. The public is not aware of the

mechanism and speed can be accurately controlled. More importantly, the start up and stop cycles can be controlled safely, as there is a lot of stored energy in the 15-tonne flywheel. Both engines are on view at Thinktank.



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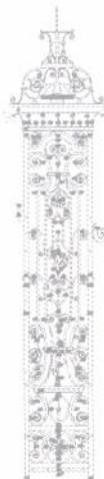
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**Planning for the future:
The AIA Plan 2001-2004**

Members attending the Association's AGM in September 2000 were asked to review and comment upon the AIA's mission, aims and role for the new millennium. The response was good and the theme of the Rolt Memorial Lecture that followed the meeting – Retrospect and Prospect for IA – further stimulated thoughts on ways forward for the Association.

This review was the first stage in the development of a new three-year plan, starting in November 2001, with the intention that this becomes an ongoing exercise to shape the work of Council and Officers over the years ahead.

The AIA Plan for 2001-2004 starts with the revised mission and aims developed from the 2000 consultation. This exercise also identified a number of key roles or themes to guide Council and Officers in their work.

Our revised mission is:

The AIA should be the principal forum for promoting both professional and volunteer industrial archaeology within Britain.

Our aims are:

- to promote the study of IA;
- to encourage improved standards of recording, research, conservation and publication;
- to support individuals and groups involved in the study and recording of past industrial activity and the preservation of industrial monuments;
- to represent the interest of IA at national level;
- to hold conferences and seminars and publish the results of research;
- to liaise with representatives of IA organisations worldwide.

In doing this, AIA Council and Officers should:

- provide leadership;
- emphasise standards;
- support IA workers;
- foster co-operation between amateurs and professionals;
- work in partnership with other bodies.

The difficulty, of course, is in the implementation and to this end we have developed a detailed action plan with a number of specific actions identified for each aim. Each

has 'timetable milestones' and an intended outcome. This action plan now dictates much of the business at our meetings and provides a framework around which to prepare budgets and develop partnerships.

Members can be assured that maintenance of high standards over the range of current activities features strongly in the new plan – but there are also some significant developments in the pipeline. These will include a revision of the AIA's manifesto Working for the Future (published in 1991) and the development of a research strategy for IA. Also, a significant extension of our awards to encourage new work and high standards in IA research, publication and conservation, not to mention holding an inaugural 'Forum' which will play an important role in the development of a number of areas in the plan.

No plan can predict the future and the AIA has to come to terms with 'external' events that cannot be foreseen. However, Council and Officers feel that it is essential that we map out a clear way forward for the AIA if it is to accomplish its demanding mission. The Association has achieved a great deal since its beginnings in 1973 but we cannot afford to rest on our laurels.

Adjusting to external changes is an important part of the plan and we are currently taking part in a number of consultations arising from Government initiatives. These have included proposals to reform the planning and development system, possible changes to the Landfill Tax Credit Scheme (which provides essential support for many industrial heritage conservation projects) and a consultation paper on the role of historic buildings and public spaces in urban regeneration. We were also invited to a recent English Heritage partners' workshop on the development of an information strategy for the historic environment sector. We are also keeping a close eye on endangered sites of national importance.

The AIA Plan for 2001-2004 is primarily intended as a working document for Council and Officers. As such it will complement a revised Working for the Future which will be our public - and glossy - 'manifesto' for members and all with an interest in IA. We will keep members up-to-date with progress at AGMs and in IA News. However, if you would like a copy of the plan, please contact Isabel Wilson at Leicester. We will be pleased to have your comments and views.

Mike Bone, AIA Chairman

LETTER

Valetta Convention again

In response to George Lambrick's letter in *IA News* 121, it is unfortunate that reporting/debating current archaeological issues via a quarterly bulletin results in unavoidable chronological delays. For example, four months separate the dispatch of my letter (*IA News* 119) regarding the Council of Europe's *European Convention on the Protection of the Archaeological Heritage (Revised)*, a.k.a. the *Valetta Convention*, and the publication of the Council for British Archaeology's (CBA) Final Position Statement (FPS). My letter was posted on, or about 8 July 2001; I understand that in July the CBA was still consulting interested parties in advance of establishing their FPS in November 2001.

With respect, the *Valetta Convention: Explanatory Report* (provided to aid interpretation of the revised *Convention*) implies that the Council of Europe's Select Committee of Experts on Archaeology and Planning favour the employment of official (legally enforceable?) permits to authorise and control archaeological activities within signatory states.

We are told that IA has finally been accepted as a constituent part of mainstream archaeology

– albeit re-branded by some as 'historical archaeology'. Consequently industrial archaeologists should actively monitor, and engage with, current archaeological issues (such as *Valetta*), debates, and politics – established and independent. Forewarned is forearmed – some might say 'mised'!?

For members with internet access, useful web sites include:

the Council for Independent Archaeology (via the *Current Archaeology* site):

www.archaeology.co.uk;

the CBA:

www.britarch.ac.uk;

and the All-Party Parliamentary Archaeology Group (APPAG):

www.sal.org.uk/appag .

Mr Lambrick's letter (*IA News*, 121) and the CBA's FPS raise various intriguing questions, answers to which may help allay fears – real or imagined. Thus:

- 1) Receipt of Mr Lambrick's letter confirms that the CBA is aware of the AIA and, presumably, its mission. Did the CBA approach the AIA - in its capacity as the principal national body representing practising British industrial

archaeologists – regarding the generation of a collective response to the *Valetta Convention*?

- 2) The British government declined to sign the *Valetta Convention* for eight years, due, reportedly, to the controversial, and potentially divisive content of Article 3. What changes were made to the *Convention* enabling the British to ratify on 21 September 2000? Furthermore, did the British government consult the wider archaeological community prior to ratification?
- 3) Has the British government/CBA favoured 'simple code of practice' interpretation of the *Valetta Convention* been presented to, and formally accepted by, the Ministers of the Council of Europe?

The *Valetta Convention* debate appears to represent the most challenging and controversial British archaeological issue of recent years. As the *Convention* must eventually impinge on IA field activities – to a greater, or lesser extent – the AIA membership should be encouraged to join the debate!

Paul H Vigor

*Flat 6, Elmscourt, Bratton Road,
Admaston, Telford, Shropshire TF5 0HA*

IA in Poland

I was recently in Poland for a conference on the 'Fox Stollen', an underground canal built in the 1790s which served a coal mine in Wałbrzych (formerly Waldenburg), Silesia. Its design was influenced by the system at Worsley which had been visited by several Prussian engineers. The Fox Stollen is currently being restored as part of the Industrial and Mining Museum in Wałbrzych. Afterwards I visited the early eighteenth century brine works at Ciechocinek, near Torun, and the Maritime Museum in Gdansk.

I also spent a couple of days looking at the industrial centre of the part of Poland which came under Russian control during partition. This lay along the rivers Kamienna, Czarna and Bobrza to the west of the Vistula and close to the city of Kielce. Today there is little industry left and much of the area is a National Park with a number of industrial museums and monuments.

The region has a long industrial history. The hematite quarry near Skarżysko-Kamienna (now home to the Rydno archaeological site) dates back to the eleventh millennium BC, and it was worked until 4000 BC. Iron smelting began in the first century AD, and every summer, at the end of August, students recreate the techniques used then at the 'Dymarki Swietokrzyskie' at Nova Słupia.

The size of iron smelting furnaces increased in the seventeenth century when Italian workers moved to the area, with production of both military and agricultural ironwork developing subsequently. Many of the works

belonged to the bishops of Kraców whose summer palace still stands in Kielce. The industry developed throughout the eighteenth century, with many factories coming under state control in 1789.

After the creation of the Polish Kingdom in 1815, considerable effort was put into enlarging industries in the area, with Stanisław Staszic preparing a plan for a series of iron factories on the Kamienna River. From 1824, Ksawery Drucki-Lubecki (Minister for the Treasury and Industry 1824-31) took over the direction of the project. Konstanty Wolicki, Philip Girard and Wincenty Niepokojczycki visited Britain in 1825-7 to look at industrial developments here, and some English workers were brought over to Poland so that their expertise could be used. Amongst these was Henry Nutall, who built the first English-type ironworks in the area at Samsonów in 1826-9. The buildings still survive today as an industrial monument, though in ruins. Nutall and his family all died in 1828-9 and are buried in Tumlin, near Kielce. Several British workers also helped to set up the iron and engineering workshops at Białogon, now part of Kielce.

There are several interesting industrial museums and monuments in the area, outposts of the National Museum of Technology and almost all associated with water power. At Maleniec there is a large water-powered ironworks which was producing spades when it closed in 1967, and at Starej Kuźnica there is a nail-making forge, also water powered. A late nineteenth century iron foundry is preserved at Chiewiska, and at Sielpia there is a water-powered rolling mill dating

from 1821. Although most of the machinery here was removed in the war, similar items have been found and are being installed. Amongst these are several English-made machine tools from the second half of the nineteenth century. Ruined sites, such as the rolling mill at Nietulisko (1824-42), survive elsewhere in the region. Although there are no local coal mines, there were attempts to introduce the use of coke, such as the preserved ironworks at Starochowice dating from the 1930s. No more local iron ore was mined after 1971, and much of the industry has now closed. However, I was shown good examples of ornamental cast-iron which is still being produced on a small scale.

Mike Clarke

Heritage Open Days – bringing people and places together

Four days of free access to discover, explore and enjoy local buildings, history and culture, including transport, industrial and military buildings, Heritage Open Days is England's biggest and most popular voluntary cultural event and regularly attracts an audience of some 800,000 people every year.

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Heritage Open Days 2002 takes place on 13-16 September, and is co-ordinated by the Civic Trust and sponsored by English Heritage. We would like to invite you to come along and visit our participating properties or if you are interested in opening a property yourself, please get in touch! The Event Directory will be published online in August on our new website www.heritageopendays.org.

To find out how and where to obtain hardcopies of the Event Directory, please contact Heritage Open Days, The Civic Trust, 17 Carlton House Terrace, London SW1Y 5AW, or ☎ 020 7930 9294.

National Railway Heritage Awards 2001

These awards, instituted in 1979 as the Best Restored Station Competition, were presented on 11 December 2001 by Sir Neil Cossons, Chairman of English Heritage. From 50 entries, seven awards were made with a further four being highly commended. The seven winners were:

Modern Railways Award – Nottingham London Road Low Level Station (now a large health club).

Ian Allan Publishing Award – Hardingham Station (waiting room and awning of the 1880s rebuilt).

Railtrack Award – Brief Encounter Café Restaurant at Langwathby station on the Settle and Carlisle line.

London Underground Award – Liverpool Lime Street Station roof restoration.

Railway Heritage Trust Award – Halifax 1855 station building (adaptation as Eureka! Childrens Museum).

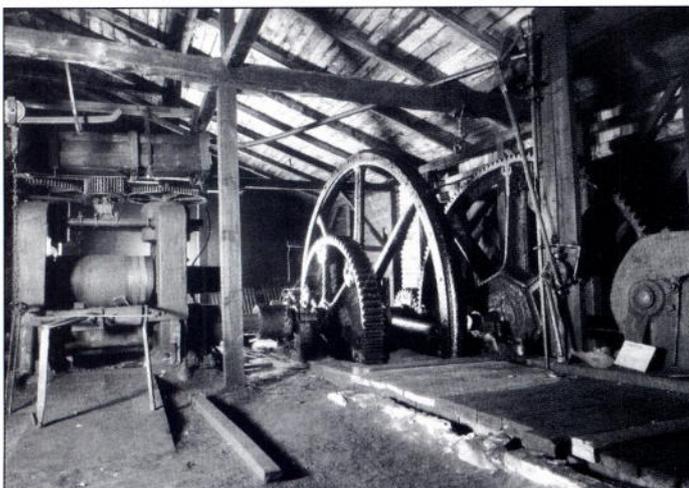
Westinghouse Signalling Award – Grosmont Signal Box and installation, North York Moors Historical Railway Trust.

Railway World Award – Gotherington West Halt station reconstruction.

The highly commended entries were: Belturbet Station (County Cavan, Ireland), Birmingham New Street Power Signal Box, the Centurion Bar and Brasserie at Newcastle Central Station and Dundalk Station, also in Ireland. The **Railway World Independent Railway of the Year Award** Winner was the Dean Forest Railway with the Bluebell Railway as runner-up.

Solovki conference

Readers will recall Mike Clarke's article in *IA News* 121 on industrial archaeology in the Russian Solovki Islands. An international conference on the preservation and development of the Solovetsky historic and architectural complex is planned to take place on 14-17 October in St. Petersburg. In 1992 UNESCO proclaimed Solovki as a site of World Cultural Heritage and a number of international organisations are already successfully working at Solovki. The conference is targeted on the further development of international cooperation in preserving the archipelago.



Inside the Maleniec rolling and spade mill

Photo: Mike Clarke

Electricity in the south west

The South Western Electricity Historical Society was formed in 1994 to broaden the base of interest in electrical history throughout the South West peninsula. It has recently become affiliated to the AIA.

There is a need to capture the individual stories of the old electricity supply undertakings before it is too late. Finding the sites of the early generating stations, particularly the hydro-electric units, is of major historical significance.

The Society has over 100 members throughout the South West. It administers an archive library at Redland, Bristol, together with a museum collection. Nine meetings/visits are held a year spread throughout the South West with a strong social element involved. The Archive and Museum Room is open for viewing once a month.

Information is available on the old undertakings in the South West, on pre-privatised SWEB and on the CEGB up to 1990. We have three newsletters a year (*Histelec News*) and these together with the Archive Indices are posted on our web site <http://www.swehs.co.uk>

Anyone interested in preserving the electrical history of the South West is encouraged to join to get involved in writing histories of the many undertakings in the many towns and villages or renovate some or the old appliances and other electrical equipment.

In a redundant switchroom at Cairns Road, Redland, Bristol, are held the archives and artefacts. The Archive consists of hundreds of old documents, books and photographs, including the earliest company minute books going back in some cases to the 1880s. These need to be documented to be made more available for archival research. With regard to the historical artifacts, it is the aim of the Society to renovate the existing equipment in order to open the Redland complex as a museum and educational centre.

Railway engineers' dictionary

The Railway & Canal Historical Society is to publish a new, extensively revised, edition of John Marshall's invaluable *Biographical Dictionary of Railway Engineers*,

which was originally published by David & Charles in 1978. It will be of A5 hardbound format with 224 pages. The pre-publication price for orders received before 31 October is £14.50, including packing and postage, and the names of those placing such orders will be printed in the list of subscribers. The price after that date will be £20.00 including p&p. Orders should be sent to Oliver Smart, 136 Westway, Raynes Park, London SW20 9LS. As cheques will not be paid in until the book is published, please post-date them to 31 October 2002.

Stoke on Trent pottery demolitions

Two large complexes of pottery buildings in Stoke on Trent have been demolished in the past two years. South east of Stoke itself, the giant Colonial Pottery, which stretched for a considerable distance along the east bank of the Trent & Mersey Canal (SJ882446), was finally demolished early in 2001. The gable overlooking the canal, still proudly carrying the words 'Winkle and Wood, Colonial Pottery, 1888' survived until the last stages of demolition. (The site of the former California Works of Kerr Stuart, the railway locomotive and equipment builders which closed down in 1930, was immediately to the east of the Colonial Pottery).

Another very large complex, Johnson Brothers Imperial Pottery

on the west side of Eastwood Road, Hanley, near the Caldron Canal (SJ888469), lingered as a ghostly ruin during 2001, but a visit early in May this year revealed that the site had effectively been cleared. However, the range of buildings opposite, on the east side of Eastwood Road, which carry the stone lettering 'Johnson Brothers (Hanley) Limited, Sanitary Works, Erected 1896', are still in commercial use.

Henry Gunston

Benguela railway

Angola plans to rebuild the 1,000-mile Benguela railway after the country's lengthy and very destructive civil war. The railway was mostly financed with British money, in 1902-28, and the whole line crossed the African continent to the port of Beira in Mozambique. It carried copper from Zambia and Zaire to the coast for shipment but was closed in 1975.

Ebbw Vale closes

The Ebbw Vale steel plant was closed by Corus on 5 July, bringing to an end a 200-year-old industry when the last tin-plate rolled off the line. Ebbw Vale was a steel town ever since an ironworks was built in 1789. The first continuous hot strip mill in Britain was opened at Ebbw Vale in 1938. 12,000 were employed in the 1960s, but it was a workforce of only 780 who lost their jobs this month. Steelmaking ceased at

Llanwern last year and Ebbw Vale's plight was not helped by poor road and rail links.

Dales limekilns

A survey of limekilns in the Yorkshire Dales National Park located over 536 sites before being ended by last year's foot and mouth crisis.

Ironbridge re-enacted

Earlier this year a BBC documentary showed the successful erection of a half-scale replica of the Ironbridge's main spans across the canal at Blists Hill. This was to test how the bridge was actually erected, which has been a matter of debate for years. The chance discovery of a contemporary painting in a Stockholm museum showed that the spans were erected before the masonry abutments and that they were supported by two wooden derricks. The exercise tested an English Heritage 3-D computer model using the manpower of the Royal Engineers.

Chemistry at the mills

The Royal Gunpowder Mills at Waltham Abbey has been designated a Landmark site by the Royal Society of Chemistry in acknowledgement of its major role over the centuries in the development of chemical sciences, particularly in the development of explosives. The Royal Gunpowder Mills is open to the public from March to October.



Under demolition – the Winkle and Wood Colonial Pottery alongside the Trent & Mersey Canal at Stoke-on-Trent in November 2000

Photo: Henry Gunston

A tale of two lifts

The famous Anderton Boat Lift, linking the River Weaver and the Trent & Mersey Canal in Cheshire, was closed in 1983 but has been restored at a cost of £7m. It was officially reopened on 26 March, although within a few weeks it had to close to sort out the problem of because water leaking from the 'watertight' gates. Meanwhile, the opening of the Falkirk Wheel, the first British lift to be built since the Anderton Boat Lift in 1875, was delayed by vandalism. It is the world's first rotating boat lift as well as a piece of sculpture and is the centrepiece of the £78m Millennium Link canal project to connect the Forth & Clyde and Union Canals between Glasgow and Edinburgh. Delegates to the AIA Edinburgh conference will have the opportunity to see it in action.

Scottish deep mine closed

Longannet Mine in Fife, the last deep coal mine in Scotland, had to be abandoned in March after being flooded by an influx of water. It was opened in 1957 but had suffered from geological problems.

Do you have a book for Landmark?

Landmark Publishing of Ashbourne, Derbyshire, are looking for new writers. They publish books on technical history and biography covering all aspects of the field and include company histories and local histories. They are especially interested in the histories of what the Victorians called the Useful Arts, the how of manufacturing and invention. Their biographies will be definitive studies of the pioneers who made Britain's industry great. They are targeting the interested informed reader but the books must have a scholarly credibility so they have to be fully referenced and well illustrated.

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Leo Biek (1921-2002)

Better known to mainstream archaeologists as an archaeological scientist, Leo Biek died on 10 January, aged 80. He was born in Estonia and came to England in 1937 from Germany. After the war, he worked at the Ancient Monuments Laboratory from 1950 until 1982. He was particularly interested in how buried objects changed in the ground under different chemical and physical conditions. Leo Biek ensured that the national slag collection was deposited at Ironbridge for storage.

Joseph Gross (1910-2002)

Joseph Gross was born in 1910 at Prague, where he obtained a doctorate in law. He came to London in 1939 and moved to Merthyr Tydfil a year later, where he initially worked in industry. In 1956 he became a lecturer in management studies at what later became the Glamorgan Polytechnic (now University of Glamorgan), a post from which he retired in 1994. Dr Gross had a long-standing interest in the history of Merthyr Tydfil, of which he published *A Brief History* in 1980. He was a founder-member of the Merthyr Tydfil Historical Society, edited the first four volumes of its journal and contributed to later issues, becoming president of the society. He joined the Merthyr Tydfil Heritage Trust in 1978 and later served as chairman, when the trust was involved in a number of important projects which aimed to preserve evidence of the town's unique ironmaking heritage, becoming president of the trust.

Dr Joseph Gross was one of Wales' greatest campaigners for industrial heritage. The preservation of Dowlais Stable and Ynsfach Engine House owe much to his personal drive and commitment. His interest never wavered and, up to his death in May, he was an active

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member of the Cyfarthfa Working Group and the Trevithick 2004 Celebration Working Group.

Concrete house by the sea

We are retired and have moved to a smaller home from Glangors, a detached house/bungalow. From the outside it appears to be in the Trinity House style, with four double bedrooms, large sitting room, dining room, kitchen, bathroom, utility room, tower room with windows on four sides, and a second toilet.

Glangors was built in 1882 of poured concrete within shutters cast as a monobloc with a solid roof of railway lines at 3-foot centres (as in the relevant factory regulations of the time). It is one of the only remaining complete examples of this type of construction in North Wales. For many years it was almost derelict. We have restored it to its original condition and consider that it should now be protected by listing as of architectural and social interest. There is a connection in the design to early Trinity House

lighthouse design, but they used a different technique. This may be of interest to readers. Photographs can be seen on our website at: www.glangors.com

Ian & Thalia Campbell

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For further details, contact the Editor.

Greater London

In the last year London has undergone great changes and from an industrial archaeological viewpoint things at first sight appear dismal indeed. Perhaps the greatest loss we are suffering is the Thames waterfront. Almost the whole riverside, both banks from Richmond to Gravesend, is now given over to luxury housing development. Some down-river wharves had been reserved in the hope that commercial shipping activity might be resuscitated in the future but this now seems a forlorn hope and the small number of protected sites are almost certain to go the same way as the rest of the riverbank quite soon.

One wonders how people in the near future will view London. Already the late nineteenth century is very remote in time and yet most of us, when we were children, knew actual living people who were alive then. How will the images of the Thames made by artists about a century ago be interpreted? Many images are already almost meaningless in a representational sense. What was being painted was often industrial pollution; Southwark was like the Black Country of the West Midlands, and already children might ask - 'please, what was industry?' The last 200 years have seen enormous changes and even London of 50 years ago, smoky and war shattered, was so different from what we have now it is hard to believe most of us were once alive then.

The area north of the two great railway termini, King's Cross and St

Pancras, has as predicted seen a great swath of demolition and no longer can lay claim to be the best part of London for industrial archaeology. Whole streets have gone. The famous listed gasholders, those which had cast-iron column guide frames, have been carefully dismantled and are now stacked horizontally close to the remaining gasholder no.8. Only the frames have been kept, the bells themselves (probably wrought iron) were cut up for scrap. The interesting and innovative gasholders with steel lattice guide frames dating from c1886 have all been scrapped. This is a good example of things being retained for aesthetic rather than technological reasons. Many of the unlisted gasholders were only slightly later than those which have been kept.

On the Isle of Dogs the dock basins are beginning to disappear as high rise office blocks spring up. A film of water a mere 10 metres deep is no impediment now the scale of development has increased and the 'lily-pad' phase of construction is coming to an end. A new museum is shortly to open on the North Quay of William Jessop's Import Dock in one of the Grade I listed warehouses. This is a development from what was to have been the Museum of Docklands and now is to be a Museum of the Thames, highly relevant as Thameside has changed so radically. It will not be an industrial archaeological museum. For the twenty-first century this would be too short-termist. The opening date for the Museum will probably be September 2002.

Military establishments formerly

guarded by the Official Secrets Act are now being opened to the public. Two examples in the Greater London Area are the Royal Gunpowder Factory at Waltham Abbey and Woolwich Arsenal. Both were very large industrial undertakings set in extensive estates. Much of the RGPF site is open as a museum and increased visitor numbers are expected here this summer. At Woolwich there is 'Firepower', an artillery museum, but a good deal of the estate by the river will be re-developed for the ubiquitous housing. The steam hammers there were removed long ago but the bases which supported anvils survived in situ until recently owing to the difficulty of removing them. This is real industrial archaeology.

The revitalised GLIAS recording group has been active at Lowne Instruments Ltd, Boone Street, Lee. This was an amazing time-capsule of a small industrial firm who were essentially scientific instrument makers. The premises had been a closely guarded secret. Lowne's were well known latterly for their air-flow meters, used in coal mines and by British Rail for research and development.

And, as if Lowne's were not enough, would you believe it in the early twenty-first century members of Crossness Engines Trust were actually removing a steam engine for preservation from recently working industrial premises at Crayford. This is something we usually associate with the 1970s. South East London can certainly still produce industrial archaeological surprises.



A Tangye cordite press of 1939, Royal Gunpowder Factory, Waltham Abbey. Photo: R. J. M. Carr

For some time now the GLIAS Newsletter has been ably edited by Robert Mason. The appearance of issue 200 was celebrated with a bumper 16-page issue and a colour supplement. A first rate computer data base is being developed for GLIAS by Chris Grabham and should be available on CD shortly - for details, e-mail: database@glias.org.uk.

The indefatigable Dr Denis Smith has published another book, the latest one is essentially about London's industrial archaeology even though the title is *Civil Engineering Heritage: London and the Thames Valley*. It is published by Thomas Telford Ltd. The appearance of this book is very significant indeed. It is the first book on London's industrial archaeology for a quarter of a century and is highly recommended.

In this short article it is not



Demolition of buildings on the east side of Pancras Road, looking north east. Whole streets have gone. Stanley Buildings in the background remain. February 2002

Photo: R. J. M. Carr



Real industrial archaeology! Steam hammer base (dug up) at Woolwich Arsenal, May 2002

Photo: R. J. M. Carr

possible to do justice to the many changes which continually take place throughout Greater London. Readers with access to the internet will find more information at www.glias.org.uk - click on News.

Robert Carr

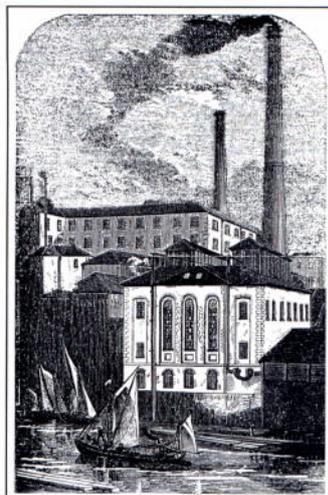
West of England

The imminent demise of the former Bristol United Breweries maltings in Gasferry Road, Bristol (noted in our last report) has been halted by a public enquiry at which BIAS gave evidence. The application was, surprisingly, called in by the Secretary of State after concerns expressed by the nearby SS Great Britain Project. The result of the hearing has yet to be published.

Further west on the Floating Harbour, proposals for comprehensive development of the remaining two-thirds of the old Bristol Brewery site have now been registered. BIAS has followed developments closely and was pleased to see that the application was accompanied by an archaeological desktop study, an architectural evaluation and a conservation assessment. The bad news, however, is that the plans ignore much of the advice in these studies and too little retention of historic fabric is proposed. This complex site has been developed, and redeveloped, over the years but includes remains of a pale ale brewery of the early nineteenth century (next to Georges' porter brewery on the other part of the site mentioned in IA News 117 (Summer 2001), some 1930s brewery buildings, the whole of the 1980s

Courage's real ale brewery and the former Bristol Tramways generating station. Only the latter is listed but the rest is in a conservation area and thus has a level of protection. The most significant finding to emerge from the developer's studies was the extent of the fabric of the former Finzel's sugar refinery – described in 1861 as 'the most important works of the kind in England, or, perhaps one may safely say, in the whole world'. BIAS appreciates the urgency for the comprehensive development of the site but stresses the need to keep as much of the historic fabric as possible.

Other important IA sites in the old county of Avon that are subject to development proposals include the historic horsedrawn tramsheds, workshops and stables in Lower Park Row, Bristol, the Royal Pier Hotel in Clevedon and De Montalt Mill on the outskirts of Bath. BIAS and AIA have supported the listing of the Bristol tram depot to provide protection for this rare survival and continue to campaign against the proposal to demolish much of the listed Royal Pier Hotel – this is adjacent to Clevedon's historic (and Grade 1 listed) pier. De Montalt was built as a water-driven paper mill in 1804-5 to produce high-quality paperboard for watercolourists – it was reputedly driven by the biggest wheel in England at the time (56 ft diameter) and was later to install a Boulton & Watt steam engine. The mill was built to the highest standards, with a detached ornamental stack, and is remarkably intact for its age. The developer has provided access for BIAS to record



Finzel & Co.'s sugar refinery as seen from Bristol Bridge in 1861. The tall round-headed windows survive in the 1930s brewery buildings

surviving features prior to sympathetic development.

The pace of development in the Bristol region continues to pose challenges for industrial archaeologists, but involvement in the development process and use of the current statutory framework provides a number of opportunities to record and conserve significant survivals from the dwindling stock of industrial monuments – it is a case study that illustrates the need for AIA to keep a close watch on current reform of the planning system.

Surviving buildings of the textile industries have been the subject of special interest for members of the Somerset Industrial Archaeological Society (SIAS). This is largely as a result of 'brownfield' policies which have rendered them vulnerable to demolition or drastic alteration.

Contrary to the general perception that Somerset's woollen industry became extinct in the eighteenth century due to the economic dominance of the North of England, the organisation of production within the county did in fact enter the factory era. SIAS is responding to planning applications, mainly for housing development, at Adderwell and Vallis Road in Frome and at the former Elworthy Brothers' premises at Westford Mills and Prowses Mill near Wellington.

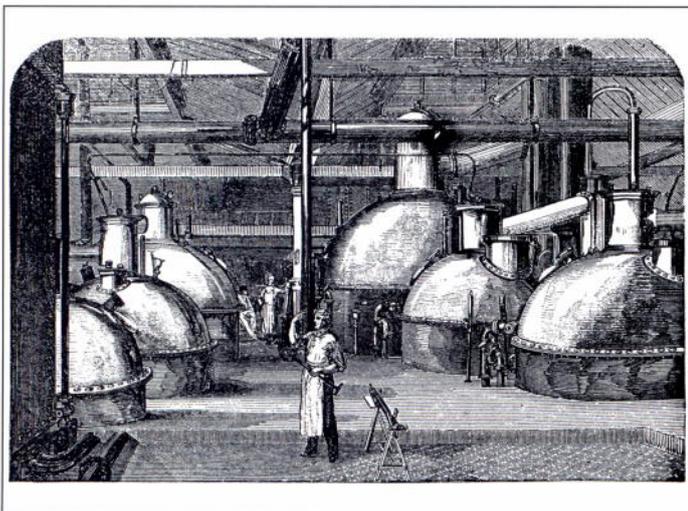
By far the most intractable problem concerns Tone Mills and Tonedale Mills in Wellington which have featured previously in IA News 98 (Autumn 1996). It was here that Fox Brothers & Co. Ltd. operated a 'twin vertical approach' manufac-

turing woollen and worsted cloth utilising all the necessary processes from unprepared wool through to the finished cloth. The legacy is a complex of Grade II* and II listed buildings including an impressive five-storey spinning mill constructed in two phases during the 1860s. Weaving sheds, an early loom shop and two engine houses have been demolished but sub-surface features such as steam power shafting are to be recorded by archaeological investigation under PPG 16 and local planning policies. Currently the standing structures are the subject of a conservation plan being drawn up by consultants to the developers.

Many Somerset mills adapted to other forms of textile production, well illustrated by Staplegrove Mills to the west of Taunton which will fall victim to a substantial road viaduct to be built across the site. An initial probing by the County Council's Heritage Group has revealed the existence of cast-iron columns by a little known Somerset founder. These are likely to relate to construction during the mill's flax industry period which was preceded by silk throwing and manufacturing (1802 - c1860) and fulling from medieval times.

South Somerset has a particularly rich heritage of mills and SIAS has joined a working party set up by the local district authority to record and assess these, building on the work of the RCHME's South-West Textile Mills Project (1996-9). The Society will play a supervisory role to an exciting exercise which could possibly attract the services of an Ironbridge Institute post-graduate. The diverse range of industries under consideration include flax at Crewkerne, lace at Chard and silk at Bruton. Two sites have national and possibly even international significance. In Castle Cary, John Boyd Textiles' future is now secure within its adopted historic home at Higher Flax Mills. The company is the only weaver of horsehair cloth using power looms in Europe. Also Dawe's Rope Works in West Coker near Yeovil, which closed in 1968 but retains its original nineteenth-century rope and twine making equipment, is being projected as a working business with visitor facilities.

Mike Bone & Brian Murless



The vacuum pan room in Finzel's Bristol sugar refinery. Clarified liquor was evaporated here and each pan held 1500 gallons of syrup

Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review*.

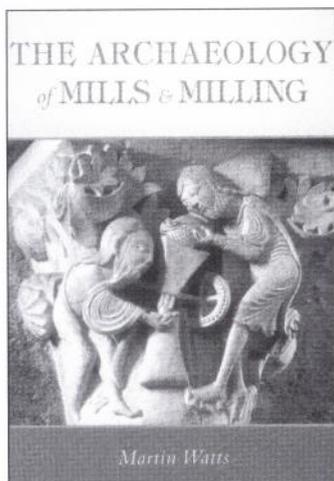
- BW Monthly*, May & June 2002
- Brewery History Society Newsletter*, 23, Spring 2002
- Conservation Bulletin*, 42, March 2002
- Focus on Industrial Archaeology* (Hampshire Industrial Archaeology Society), 57, December 2001
- GLIAS Newsletter*, 199 & 200, April & June 2002
- Images of England*, 7, Spring 2002
- The Mundling Stick*, 8/1 Spring 2002
- PHEW Newsletter*, 93, March 2002
- Scottish Industrial Heritage Society Bulletin*, 22, April 2002
- Scottish Industrial Heritage Society Review*, 41, Spring 2002
- Somerset Industrial Archaeological Society Bulletin*, 89, April 2002
- Suffolk Industrial Archaeology Society Newsletter*, 77, May 2002
- TICCIH Bulletin*, 16, 2002
- Wind and Water Mills*, 21, 2002

Books Received

The following books have been received for review in *Industrial Archaeology Review*.

The Archaeology of Mills & Milling, by Martin Watts, Tempus Publishing, 2002. 160 pp, 96 illus. (27 colour). ISBN 0 7524 2392 4. £16.99.

This account of mills and milling, from prehistory through Roman, Anglo-Saxon and later medieval times, to the post-medieval and modern centuries, is not just another book about windmills and watermills. By interpreting the archaeological evidence and, for the later period, the documentary sources and above-ground remains, the author pieces together a history of British molinology. Throughout, he emphasises the development and use of artefacts and machines for grinding grain, their place in the historical landscape and in the production of an essential food. None of this book should be ignored, although sections on medieval windmills, industrial mills and horse mills and post-medieval mills are of particular interest to industrial archaeologists. The text is illustrated with well-chosen photographs and archaeological plans.



Biographical dictionary of civil engineers in Great Britain and Ireland 1500-1830, ed. by Alec Skempton, M. M. Chrimes, R. C. Cox, P. S. M. Cross-Rudkin, R. W. Rennison and Ted Ruddock, Thomas Telford, 2002. 944 pp, illus, ISBN 0 7277 2939 X. £95.00.

Intended as a valuable biographical reference work on the lives, works and careers of individuals engaged in the practice of civil engineering, this volume looks specifically at those whose careers began before 1830. Specialist authors describe the background training and achievements of engineers over 350 years. For the first time, historians, and engineers and architects involved in restoration work, will have an authoritative source of information on the engineers who designed public works over the period.

The Chelmer & Blackwater Navigation, by John Marriage, Tempus Publishing, 2002. 128 pp, 190 illus. ISBN 0 7524 2392 4. £12.00.

After a few earlier failures, an Act of Parliament in 1793 turned the River Chelmer into a navigable waterway from Maldon to Chelmsford, Essex's county town. There were 12 locks from sea level at Heybridge Basin to Chelmsford and after nearly 200 years of commercial traffic the canal was opened for pleasure craft. The uncrowded waterway has been called one of Essex's forgotten treasures. After a brief history, the book illustrates all aspects of the navigation, with mills, timber yards and a gas works along the way.

The Duke's Cut: The Bridgewater Canal, by Cyril J. Wood, Tempus Publishing, 2002. 128 pp, 175 illus. ISBN 0 7524 2371 1. £12.00.

The Bridgewater canal is distinguished as England's first canal and it was one of the major routes of the North West that helped Manchester to develop as a centre of trade and industry in the nineteenth century. Since completion in 1765, it has been regularly used by commercial and passenger traffic. The author gives a history of the canal and illustrates its course with photographs interspersed with clear maps to which the pictures can be related. Of special interest to industrial archaeologists are the Castlefields area and the remarkable Barton Swing Aqueduct, an engineering masterpiece over the Irwell section of the Manchester Ship Canal. James Brindley's original aqueduct was a wonder of its age and earned the nickname 'Castle in the Air'.

Hellifield & its Railways, by Andrew Wilson, Tempus Publishing, 2001. 128 pp, 229 illus. ISBN 0 7524 2357 6. £10.99.

Hellifield, between Skipton and Settle in Yorkshire, found itself on the railway route from London to Carlisle and the railway dominated the place for around a century. There was much expansion here at the junction of the Midland Railway's Carlisle line and the Lancashire & Yorkshire Railway. Both companies built houses for their workers. Steam gave way to diesel from the 1950s and the servicing facilities soon disappeared. After closure, the engine shed was demolished in 1972. Finally, the station was reduced to an unmanned halt. This collection of photographs records aspects of that period.

Industrial Tourism, just a stone's throw from Barcelona: finding out how things work. Agència de Promoció Turística, 2001. 19 pp., illus.

This useful booklet contains details and location map of 49 sites in the province of Barcelona. Industrial Catalonia possesses many remains of the nineteenth and early twentieth centuries, including factories, museums, mines, model factory villages, warehouses, kilns, mills, canals and wine cellars. The agency office is at Mallorca 244, 08008 Barcelona, Tel 0034 934 022 900, e-mail www.turismeindustrial.org

IA@WWW in .BE en .NL – 1 Industriële Archeologie, by Peter Scholliers, Brussel, Vlaam Centrum voor Volkscultuur, 2002. 48 pp, illus. ISBN 90 77094 03 02.

This book, in Dutch, has been produced by the Vlaams Centrum voor Volkscultuur, Gallaitstraat 76/2, B-1030 Brussel, Belgium, tel 02 243 17 30, e-mail info@vcv.be. It provides a comprehensive review of web sites that are available to the student of industrial archaeology. The sites described and in some cases illustrated are in a variety of European languages.

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Short Notices

Boating Life and Work: Poland's River Odra in the 1950s, by Mieczyslaw Wrablewski, Milepost Research, 2001. 24 pp, 35 illus. ISBN 0 95192 361 7. £2.00, available from Milepost Research, 41 Fountain Street, Accrington, BB5 0QR.

A collection of striking photographs of the working boats, their crews and families on the Odra nearly half a century ago. They are just a few from the photographer's very large collection. The booklet has an introduction by Mike Clarke giving an overview of the history of Poland's waterways with recent photographs. A map shows the canal system in Poland.

Stott Park Bobbin Mill, by Peter White, English Heritage, 2002. 28 pp, 33 illus. ISBN 1 85074 796 2. £2.25.

This new colour guide book explains how bobbins were made and traces the history of the mill and its workforce. Stott Park is one of the few remaining examples of a type of mill once common in Lakeland. Built in 1835, it worked until 1971, one of the last bobbin mills to close. The buildings and machinery are little changed from a century ago and visitors to this English Heritage site are given demonstrations of the lathes in operation.

The Field Archaeology of Exmoor, by Hazel Riley & Robert Wilson-North, English Heritage, 2001. 192 pp, many photographs and drawings in black and white and colour. ISBN 1 873592 58 2. £12.95.

A wealth of fascinating and diverse archaeology lies concealed in Exmoor's valleys, woods and moorlands. Six years of original survey work presents the evidence from prehistoric stone settings and burial mounds to medieval castles, lost settlements and nineteenth-century industrial remains. For once, the full archaeology is given in this well illustrated book, right up to the twentieth century.

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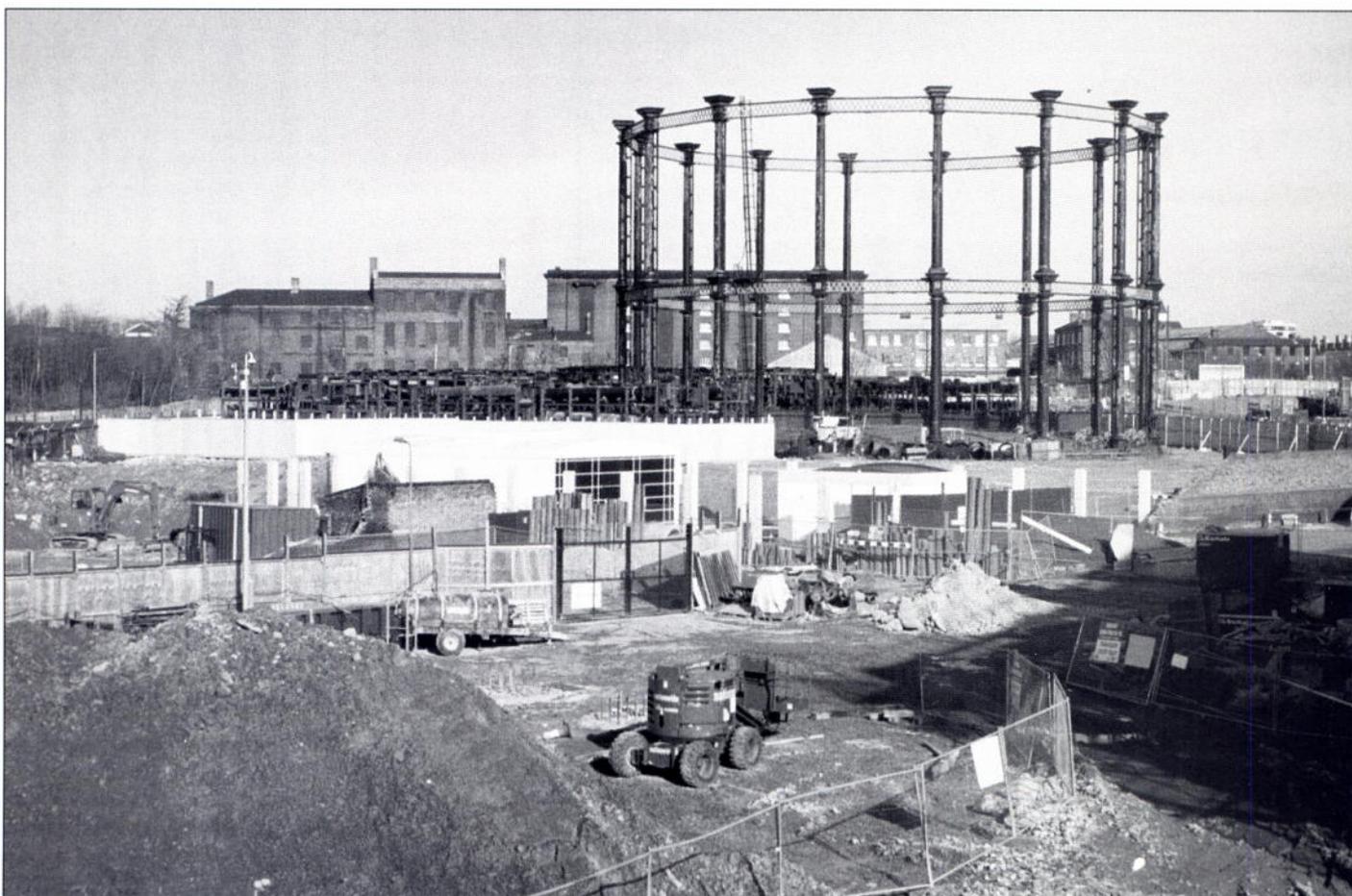
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It's all gone! View looking north east from St Pancras Station. Columns from the dismantled listed gasholders are stacked horizontally by the single surviving gasholder. February 2002 (see page 12)

Photo: R. J. M. Carr

**6-12 SEPTEMBER 2002
AIA ANNUAL CONFERENCE
IN EDINBURGH**

at Heriot Watt University, Riccarton Campus, Edinburgh. Begins with the Friday seminar, 'Industrial Heritage and National Identity', followed by the main conference and then four days of lectures and field visits. Hosted by Scottish Industrial Heritage Society and Scottish Industrial Archaeology Panel. Contact Liaison Officer, Isabel Wilson, AIA Office, School of Archaeological Studies, University of Leicester, Leicester LE1 7RH ☎ 0116 252 5337, Fax: 0116 252 5005, e-mail: AIA@le.ac.uk

**13-16 SEPTEMBER 2002
HERITAGE OPEN DAYS**

free access to discover, explore and enjoy local buildings, history and culture, including transport, industrial and military buildings throughout England. Details from The Civic Trust, 17 Carlton House Terrace, London SW1Y 5AW, ☎ 020 7930 9294, website www.heritageopendays.org.

**20-22 SEPTEMBER 2002
ANGLESEY TECHNICAL
HISTORY WEEKEND**

at Beaumaris, organised by the North West branch of the Newcomen Society, with visits including Telford's Menai suspension bridge, Amlwch port, Parys Mountain copper mines, Holyhead breakwater and maritime museum. For details contact Bernard Champness ☎ 0161 980 7612 or E-mail: Bernard.jill.champness@tinyworld.co.uk .

**1 OCTOBER 2002
27TH SIHG INDUSTRIAL
ARCHAEOLOGY LECTURE
SERIES**

at the University of Surrey, Guildford, the 27th series of Surrey Industrial History Group fortnightly Industrial Archaeology lectures begins with James Watt. Future lectures include sanitary potteries, Lea valley industries, cocoa, Shuttleworth Collection, hops, water meadows, submarines and aircraft archaeology. Details from David Evans, 48 Guildford Park Road, Guildford, Surrey GU2 5NF.

**12 OCTOBER 2002
A LIQUID - WATER AND ITS
APPLICATIONS**

at Dorchester, a study day organised by D.I.A.S. and Dorset County Council. with speakers on topics including brewing, cliff railways, watermills and millwrights, textile mills, and engineering aspects of land drainage and flood control. For details send SAE to Claire Pinder, Senior Archaeologist (Promotion & Liaison), DIAS Oct 2002, Environmental Services, County Hall, Colliton Park, Dorchester DT1 1XJ.

**19 OCTOBER 2002
EMIAAC 64: SPLASHING,
SPARKING & SQUIRES**

at Yardley Hastings, Northamptonshire, the 64th East Midland IA Conference with lectures on the technology of the country house and a visit to the grounds of Castle Ashby. Organised by Northamptonshire IA Group. SAE for details from Susan Ranson, Gordons Lodge, Ashton, Northampton NN7 2JP.

**20-24 JANUARY 2003
FIRST INTERNATIONAL
CONGRESS ON
CONSTRUCTION HISTORY**

at Madrid, aiming to promote construction history as a legitimate field of study and to determine its role in the future.

**5 APRIL 2003
SERIAC**

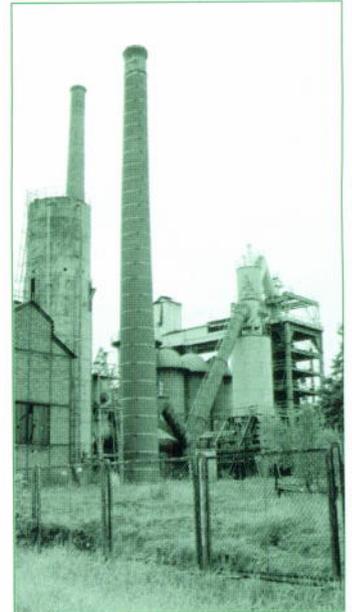
the South East Region Industrial Archaeology Conference, at University of Greenwich, Royal Naval College, Greenwich. Advance notice only.

**10 MAY 2003
SWSWRIAC**

the South West and South Wales Region Industrial Archaeology Conference, at The Town Hall, Devizes, Wiltshire. Advance notice only.

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.

A full diary can also be viewed at www.industrial-archaeology.org.uk



*The Starochawice ironworks in Poland (see page 9)
Photo: Mike Clarke*



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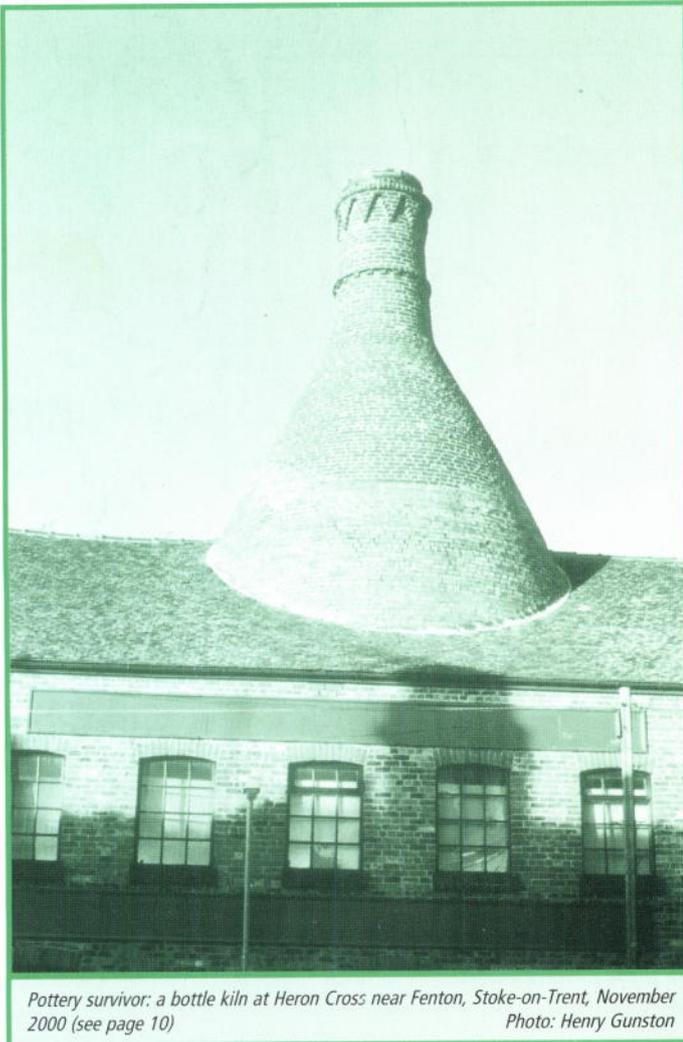
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- 30 June for August mailing
- 30 September for November mailing
- 30 December for February mailing

*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 Office, School of Archaeological Studies, University of Leicester, Leicester LE1 7RH.
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The views expressed in this bulletin are not necessarily those of the Association for Industrial Archaeology.



*Pottery survivor: a bottle kiln at Heron Cross near Fenton, Stoke-on-Trent, November 2000 (see page 10)
Photo: Henry Gunston*