

# INDUSTRIAL ARCHAEOLOGY NEWS

93  
SUMMER  
1995

THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

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## Hydraulic Rams

Jeremy Milln

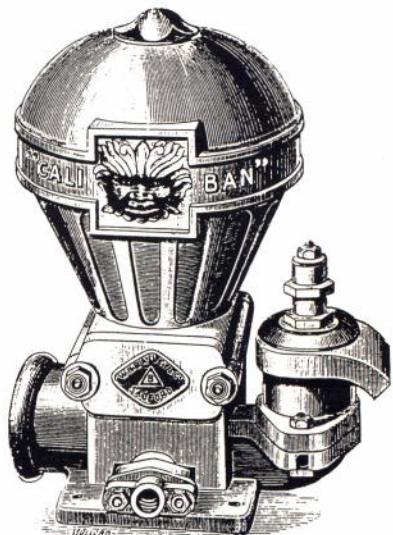
Recent water price rises (already up on average 67% since privatisation) are concentrating minds on cheaper alternative supplies. As always, the best methods are those which have been around a long time, and for the hydraulic ram this has been since 1772. The working and history of this environmentally-friendly and remarkably simple system is outlined and a case is made for conservation and further research.

Many now regard hydraulic rams to be minor industrial relics of concern only to archaeologists. Yet the use of most rams for domestic water and farm irrigation was discontinued little more than a generation ago, killed by the arrival of 'mains', the perceived convenience of oil- and electricity-powered pumps and, with agricultural intensification, of declining water quality in many areas.

My researches with the National Trust show that scores of rams have been installed on land in its ownership, but it is no surprise that today very few (eg Hembury, Sheffield Park Garden, Castle Drogo, Erdigg, Hadrian's Wall and Sherborne Estates) are still used and only that at Cragside is

interpretively displayed. Because it needs a fall of water, the only place a ram cannot be used is in entirely flat country; elsewhere, their non-use may increasingly be seen as unfortunate. Historically interesting, non-polluting, visually unobtrusive, relatively quiet, water and energy saving, durable and indefinitely maintainable, rams, more than anything else, define for us the conservation and sustainability ethos. Amongst water power schemes, hydro and turbine projects today enjoy the more vocal sanction of the environmental lobby. Rams may not be trendy, but they are cheap and they reinforce the point that by saving energy, generation anyway becomes less necessary.

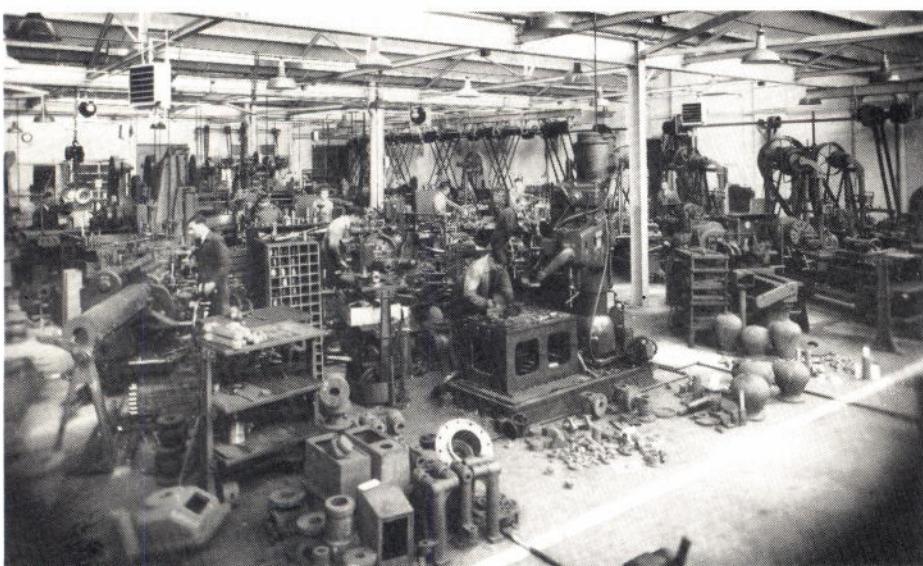
The ram takes its pedigree from the piston pressure pumps invented to clear water from medieval mines, illustrated by Georgius Agricola in *De Re Metallica* (1556). The principle is that a vacuum/pressure created within the pump cylinder will draw water/have water forced in and this is then expelled via an outlet valve. A ram has a pair of flexible rubber check valve diaphragms (its only moving parts) instead of a piston. The energy



Ram by W H Bailey & Son of Salford, from a nineteenth-century trade catalogue. Caliban is, of course, the hideous water-girt slave in Shakespeare's *The Tempest*

comes from the natural gravitational fall of water in a stream, which at a point of flow past the diaphragm in the inlet pipe causes it to close suddenly. A kinetic pulse is produced causing the second diaphragm to open allowing some water into the air chamber and up the discharge pipe. The pressure then falls in the inlet water pipe and the first diaphragm reopens while the air compressed into the air chamber causes the second diaphragm to close and the water in the discharge pipe to move away under pressure. The whole cycle is repeated approximately 50 times per minute and will continue to operate automatically in this way ad infinitum or, at least, until either the valve rubbers perish or the water supply is interrupted. Admirers consider the ram to be the nearest thing to the perpetual motion machine yet invented.

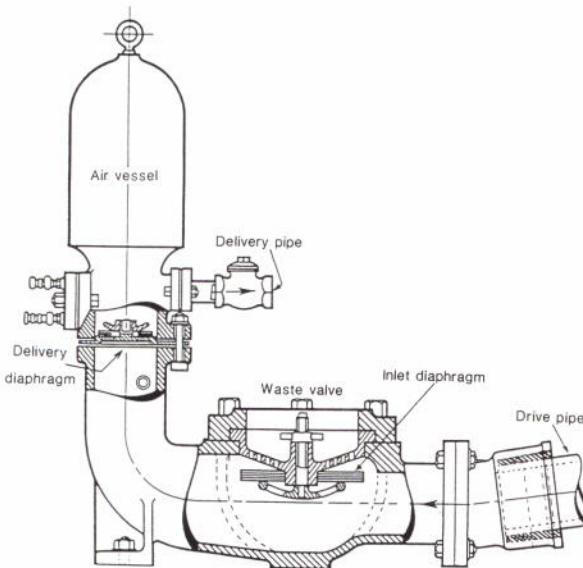
The pump rate varies according to the volume and fall of the water supply, the height of the outlet pipe and the size of the chamber. About 15% of the supply will be raised to a height five times the fall in the inlet pipe. Water may be raised as much a 60 ft (18.3 m) on a fall of 2 ft (0.6 m), but with greater falls or volumes 300 ft



W H Bailey's engineering workshop, c1935 Note the rather plainer air vessels the firm was using at this time. The workshop, in Ordsall Road, Salford, was destroyed during an enemy raid in World War II

Photo: The National Trust

Faversham Gunpowder Works • Submarine Telegraphy • Coal Matters • Thames Tunnel  
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*The Blake simple-type 'hydram': longitudinal section, at approximately 1:20 scale.*

Drawing: The National Trust

(91.4 m) in height and 2 miles (3.2 kilometres) in distance with an output of up to 50,000 gallons a day are commonly achieved, making it an ideal installation for many estates. For demanding water requirements, eg in irrigation, Green & Carter make reinforced and outsize ('Leviathan') rams capable of lifts of 1,000 ft (305 m) or, with 36-inch (914 mm) drive pipes, huge outputs. A Compound ram is used where either the fall or flow rate of a stream is inadequate. Deriving its power from a plentiful supply of impure water, such as a river, it is capable of pumping the water of the stream from the point of confluence.

The history of the ram goes back to 1772, when the principle was discovered by John Whitehurst and a machine was produced for work in a brewery in Oulton, Cheshire. Whitehurst's pulse valve took the form of a tap which had to be opened and closed manually by a small (and presumably very bored) boy. It was Pierre Montgolfier, better known for the hot air balloon, who in 1796 invented the automatic pulse valve, patenting it for mass commercial production.

In Britain, in 1814, Josiah Easton's hydrological and engineering company based at Sunninghill, Berks, acquired the rights of manufacture and marketing for the British Empire, but numerous other small foundries and agricultural machinery companies soon produced variants. In the northwest Midlands I know of rams by A & W J Massey of Newport, Salop, W H Smith and Wyatt's, both of Whitchurch, Salop, F W Pass of Congleton,

Blakes rams which supplied the mighty fountains in the Taj Mahal gardens.

The location and recording of rams require the skills of the industrial archaeologist. Many ram sites are marked on the current or recent 1:2,500 O.S. map series, but others which have become silted or lost may sometimes be identified by the catchpit or causeway, by pipe-work or by a ram house. Ram houses are an interesting study in themselves and often resemble small icehouses, with which they are sometimes confused. Operating rams can withstand frosts, but a brick or stone vault ensures protection when not in use, as well as providing defence against flood and interference. Few county Sites and Monuments Records have systematically recorded rams, a deficiency common to many types of industrial site and for which the IRIS form has, of course, been designed. Rams, like so much of the 'furniture' of the historic landscape, are at risk of theft and this adds an extra urgency to the need to record.

While a ram may have an intrinsic value both to 'collectors' and to hydraulic engineering historians; to industrial archaeologists, it is the context which is most important. There is, however, a place for a National Ram Collection, the start of which was made by M J Crumpton at the Bewdley Museum, Worcs, in the 1970s. This collection joined that at the Green & Carter Works at Ashbrittle, Somerset, until 1994 when it was moved to Heligan Manor in Cornwall following the restoration of its remarkable ram/reservoir system

Cheshire, J Evans (who also made the familiar Lion 'village' Pumps) of Wolverhampton, W H Bailey of Salford and J Blake of Accrington, as well as Easton's. They were prolific manufacturers. Already by 1860 Easton's (variously known as Easton, Amos & Anderson and as Easton, Courtney & Derbyshire) alone had been responsible for more than 1,000 installations in the British Isles. The Green & Carter foundry at Kingsworthy, Winchester, Hants, acquired Easton's (together with all its records) in 1928 and has remained independent. Blakes did the same with some of its former competitors but it has been taken over by All-speeds Ltd, a member of the GEI International Group. Blakes now make no more than 100 rams a year; mostly for export to the third world, but at one time it was a major player in hydraulic engineering. Until the end of the British Raj, it was



*The ram and beehive ram house of c1845 at Ossington Hall, Newark*

Photo: The National Trust

installed by the Tremaine family. The rams may be seen by visitors to the 'lost gardens' of Heligan. If AIA members happen to know of any ram which, perhaps because it has not been possible to retain it in situ, is now 'loose', I, or John Nelson at Heligan, would be very glad to hear of it.

Today, only Green & Carter and John Blake still make rams but both retain extensive archives (at Green & Carter there survive some papers from 1774, and from 1860 every letter, plan and account) so that it is possible to identify and date many existing installations as well as readily prescribe correct parts for repair. Rams may be 'green' but they are real, not alternative, technology and you do not need to seek advice from Machynlleth! While firms of hydraulics engineers can supply, both manufacturers are approachable direct and indeed have their own engineers. Both firms are also happy for bona fide researchers to consult their records. □

#### *Useful addresses:*

**Green & Carter Ltd, Vulcan Works, Ashbrittle, nr. Wellington, Somerset, TA21 0LQ (leading surviving manufacturer)**

Tel. (01823) 672365 or (01374) 108884 (mobile), fax. (01749) 673065 or (01823) 872950

**John Blake Ltd, P.O. Box 43, Royal Works, Accrington, Lancs, BB5 5LP (manufacturer)**

Tel. (01254) 235441, fax. (01254) 382899

**Heligan Manor Gardens, Pentewan, St. Austell, Cornwall, PL26 6EN**

Tel. (01726) 844157 (National Ram Collection)

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# Porthcurno: Centre of the World

John Packer

Just a few miles from Land's End, and referred to as Cornwall's best kept secret, the telegraph museum at Porthcurno is of world importance. Established in 1870, the cable station 'PK' became the hub of a world-wide submarine telegraph network.

Porthcurno beach is known to holiday makers for its golden sand, backed by granite cliffs and flanked by the craggy headland of Trelyn Dinas and the Logan Rock, and the famous open-air Minack Theatre cut from the cliffs. The casual visitor may have been surprised at such a remote location for the Cable & Wireless training college, set in the valley behind. The reason for this apparent anomaly stems from the choice of Porthcurno as a major landing point for submarine cables.

The cable that landed at Porthcurno ('PK') beach in 1870 was the start of a world-spanning telegraph system that stretched via the Mediterranean to Australia and the Far East. It was the brainchild of businessman and entrepreneur John Pender, who had made a small fortune from the Atlantic cable of 1866. This was the start of the Eastern Telegraph Company's (later, Cable and Wireless) great network. Other cables were landed at Porthcurno until there were 14 linking Britain with her Empire and became the largest cable station in the world. Messages were sent in cable-code, a type of Morse which was sent by hand in the early years and received as flickering spots of light or wavering ink lines on paper tape.

The cable station's code name 'PK' is an abbreviation derived from the old name Porth Kernow or 'port of Cornwall'. It formed the link in well over 100,000 miles of cable. ETC owned 40,000 miles of cable, but other companies used Porthcurno, such as the Eastern Extension Co (24,340 miles) to India and China etc, the Western Telegraph Co, to South America, the Eastern and South Africa Co, around Africa, and the PQ cable a link across the Channel to Brest and thence to Nova Scotia (a white pyramid beside the coastal footpath now marks where this cable came

ashore and up the cliff). At the back of the beach is the old cable hut which received many cables. At least 21 old cables and pieces of abandoned shore ends lie buried beneath the sand.

The telegraph network was of strategic importance in wartime. Wireless signals could be intercepted but cables were secure from eavesdropping. British cableships cut enemy cables in both world wars, which is how a German Atlantic cable was 'stolen' and diverted into Mousehole and then Porthcurno. In World War II Cornish tin-miners were employed to blast tunnels out of the granite hillside at Porthcurno and the station was moved underground, complete with its own power station and blast-proof doors. The station finally closed in 1970 following a century of service.

In the 1980s David Kendall-Carpenter of the Cable & Wireless College could see the 'end of an era' for the old cable telegraphy which had linked Britain with the world for so long. His foresight resulted in the saving of a unique collection of beautiful brass and mahogany instruments dating from the pioneering years of submarine telegraphy.

Cable & Wireless removed its training college from Porthcurno to Coventry in 1993 and with the move came the danger of this link with Cornwall's role in cable communications disappearing. A re-located museum would lose the historic context of Porthcurno with its Victorian and wartime associations and the Trevithick Trust was therefore anxious that the collection should remain at Porthcurno. This was supported by Cable & Wireless who still own the site and happily the new tenants of Porthcurno did not require the use of the north tunnel. A feasibility study was commissioned by Cornwall County Council and it was agreed to try to keep the museum at Porthcurno and open it as an all-weather attraction for visitors. With the help of the Trevithick Trust, meetings were held and 20 former Cable & Wireless staff showed interest in the preparations for public opening. Some of the superb brass and mahogany instruments needed repairing, walls redecorating, demonstration tables wiring, etc.



Inside the Porthcurno ('PK') telegraph station, c1952

Photo: The Trevithick Trust

Much of the value of the collection lies in its completeness. Not only do we have early ink recorders, but we also still have stocks of glass siphons, the siphon-grinding jigs, the beeswax and silken cords to mount them, the ink and paper slip. There are examples of submarine cables, as well as cableship reports, cable repair kits, early cable charts, cable test sets, and more.

Porthcurno is part of the history of submarine cables. Many of the methods used to locate faults on cables had their origins in experiments made here in the last century. Three cables which still terminate in the museum demonstrate various earth currents, stray polarisation effects and other classic problems associated with fault location, while regenerator equipment developed by the ETC in the 1920s to boost signals on long cables forms a chapter in the development of today's computerised digital networks.

The collection is not just electrical equipment. There are hand-written logs, photographs and social history memorabilia of all kinds, and a 24-ft scale model of a cable laying ship. There is also a small vintage wireless collection and some interesting associations with industrial espionage circa 1901!

Britain's Empire-spanning Victorian cable network had a social, political and commercial significance equal to the development of the railways. Yet almost nothing remains except miles of rusting cables at the bottom of the oceans of the world – and this one collection at Porthcurno. The potential educational value of the collection is wide. Unusual and memorable demonstrations of electricity and magnetism can reinforce Physical Science aims in the National Curriculum. Geographical and social aspects of life in Cornwall and on remote telegraph relay stations around the Empire vividly illustrate aspects of Victorian life, and the World War connections are obvious.

The museum was opened for guided tours in the summer of 1994, and work continues to improve the site. Summer opening days are still limited, so potential visitors are advised to check first with the Trevithick Trust, ☎ 01209 612142. □



The Cornish seaside: bringing a submarine cable ashore at Porthcurno beach, c1952 Photo: The Trevithick Trust

# Oare Gunpowder Works

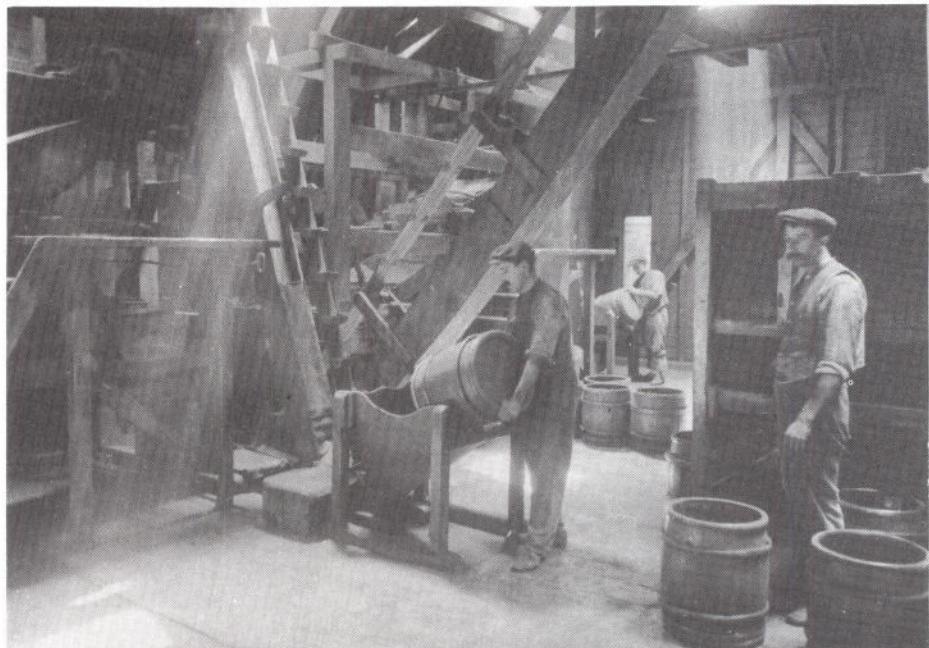
Paul Everson

The remains of the Oare Gunpowder Works near Faversham in Kent are not only a remarkably complete survival of a monument of an uncommon type, but they are also one element in a long-established industry centred on Faversham, that was of national as well as local significance. The report of a recent survey has just been published.

A survey undertaken in 1991 by the Royal Commission on the Historical Monuments of England (RCHME) revealed that remains of the former Oare Gunpowder Works survive extensively as field monuments. The exercise was at the request of Kent County Council's County Archaeologist, Dr John Williams, when the site was under threat of development. Happily that threat has now receded, as proposals for a gypsy site at one end of the works have been abandoned and Brett's, the aggregates company which owns the land, has helpfully agreed to forego an existing planning permission for further gravel extraction. Swale Borough Council, also helpfully, have expressed an interest in taking a long lease of the site, laying a 'powder trail' through part of it and making it accessible to the general public. Like most other former gunpowder factories, the site is well-wooded, with considerable potential for quiet recreation.

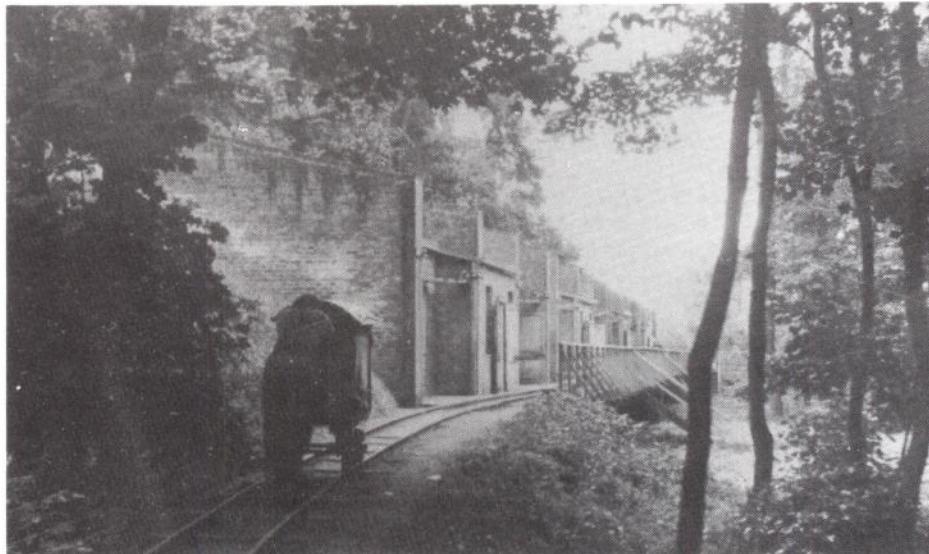
The survey report traces the history of the factory from 1719, when the first recorded proprietor was a Huguenot, Francis Gruuber. It was remodelled and updated several times before ICI closed it in 1934, transferring some of its workforce and machinery to Ardeer in Ayrshire. It contains an inventory of over 30 factory buildings, keyed to a site plan. A few have been completely destroyed but most, including one or two houses originally occupied by staff, survive either intact or as ruins. The most spectacular, perhaps, are the remains of the glazing house (best seen in winter when it is not submerged by undergrowth), the corning house and the 275 ft-long range of 1926 incorporating mills. Just as importantly, however, the survey has pinpointed and identified remains which probably no-one had noticed before because they are so overgrown or simply buried; yet all form components of the former Works and together contributed to its functioning.

*continued opposite*



*The Oare Gunpowder Works at Faversham, interior of Corning House*

*Photo: Arthur Percival Collection; copyright: Faversham Society*



*The Oare Gunpowder Works, tramway approaching first-floor platform of the 1926 Incorporating Mills, with man pushing powder bogie, c1926.*

*Photo: Arthur Percival Collection; copyright: Faversham Society*

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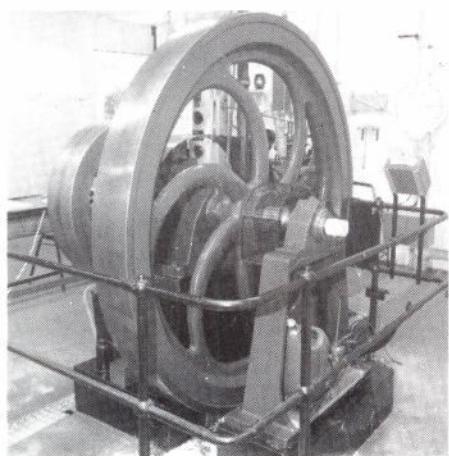
### STUDENTS' FAVOURITE

Southampton University's Department of Mechanical Engineering has been running a veteran Crossley gas engine in its laboratories since 1897. Over the years, the engine has proved a favourite with students, being a prime example of a working stationary gas engine built according to Victorian engineering standards, with its unusual cylinder oiling system and 'hit and miss' governor. The department still uses the engine regularly as part of its undergraduate course where it provides an excellent example of a four-stroke engine operation. In fact, due to its simplicity, it is better than many modern, more complex engines for demon-

strating the basic principles. As part of the run-up to the engine's centenary celebration the department would like to hear from past students who used the engine, no matter how long ago, and may have an interesting story or even photographs of the engine with identifiable people. If you can help – or know of someone who can – please contact Richard Bowen, Department of Mechanical Engineering, University of Southampton, Southampton SO17 1BJ, **T** 01703 593807.

### BOILER FOR SALE

Falkirk District Museums have available for sale a small, 80 lbs psi coal-fired boiler in good condition. Contact Carol Whittaker, Callender House, Falkirk FK1 1YR, **T** 01324 471853.



*left: When did you last see this Crossley engine?*

*Photo: University of Southampton*

# The East Midlands Industrial Archaeology Conference 25 years on

Marilyn Palmer

The East Midlands Industrial Archaeology Conference is unusual among the regional IA conferences in that two are held annually, so that after 25 years 1995 sees its fiftieth meeting. The strength and success of EMIAC during this time is therefore worthy of recognition.

The East Midlands societies have held EMIACs since 1970, the first being organised by the Leicestershire Industrial History Society (LIHS) at New Walk Museum in Leicester on the subject of 'Industrial Archaeology - a policy for the future' - a title which anticipated that of the AIA Policy Document *Industrial Archaeology: Working for the Future* by 21 years!

The early EMIACs were organised in turn by LIHS, the industrial archaeology sections of the Derbyshire Archaeological Society and the Society for Lincolnshire History and Archaeology, together with the Railway and Canal Historical Society in the East Midlands and the Nottinghamshire Local History Council, the latter being superseded in 1979 by the Nottinghamshire Industrial Archaeology Society. To society secretaries, EMIACs used to come round with dreadful regularity every two and a half years and it was with great relief that they welcomed the Northamptonshire Industrial Archaeology Group to join the original five societies. Only on three occasions has an outside group organised EMIAC, the Tramway Museum in 1980 and 1983 (when Chris Irwin was still living locally) and the Peak District Mines Historical Society in 1994. And there has only been one gap in EMIACs, the autumn of 1984 when Lound Hall Mining Museum was due to organise one and unfortunately was closed down rather suddenly -

Oare Gunpowder Works continued from previous page

Until the advent of oil and electricity as power sources, the works relied mainly on water to drive its machinery. Springs rose within the site at the Bysing Wood Road end and a complex system of leats and narrow-gauge canals was built for power and transport purposes. These, and later works tramways, are the subject of another sec-

so EMIAC members all went over to Staffordshire for the first (and only?) West Midlands Industrial Archaeology Conference instead.

EMIAC is the oldest and most continuous of the regional industrial archaeology conferences. Other groupings now exist in the south-east (SERIAC), eastern England (EERIAC), the southwest (SWIAC) and the north-west (NWIAC), but none have managed two conferences a year for 25 years! The secret of EMIAC's success lies in the interim meetings of EMIAC secretaries or representatives, who get together twice a year to report on the last EMIAC and oversee the organisation of the next one. There is also an EMIAC fund, which is passed from one society to the next, giving a float to pay deposits for room hire, printing costs, etc. There is even a set of signs for bookstalls, registration, etc which is passed from one conference organiser to another! The surplus built up in the EMIAC float has been turned into a fund to support small projects within the region, such as the restoration of a waterwheel in Lincolnshire, consolidation at Morley Park blast furnaces in Derbyshire and continuing work on the Swannington incline in Leicestershire. Each EMIAC incorporates a business meeting, at which the participating societies report on activities within their own counties or spheres of interest, which has helped to unify the organisation. We also have an EMIAC archivist who circulates information to non-society EMIAC regulars and produces a composite list of society lectures and outings, so that members of the EMIAC group often go to each other's events.

The topics of EMIAC have been very diverse, ranging from themes such as bell casting, road

tion in the survey report. Finally, the results of the survey have been used to trace the evolution of the works in the nineteenth and early twentieth centuries.

Notice of a heftier report on a similar RCHME survey of the Waltham Abbey Gunpowder Factory site was given in IA News 89, and now the Oare survey has been published too, jointly by RCHME

stone, building materials, lead and coal mining, shoe and leather manufacture, brick and tile making, textiles, and even a day at the seaside, to anniversaries such as the sesquicentenaries of the opening of the Leicester and Swannington Railway and the Midland Counties Railway, or the 400th anniversary of the birth of William Lee, inventor of the stocking frame, to special events such as the restoration of Moira Furnace. EMIAC secretaries have become expert at thinking up catchy titles for their conferences: examples include 'Rock around the peak' (Quarrying in Derbyshire), 'There's no fuel like old fuel' (solid fuel manufacture), 'Effluent Nottingham' (water supply and sewage disposal) and 'A Brush with Transport' (transport in Loughborough, including a visit to Brush Engineering, manufacturers of railway locomotives including those for the Channel Tunnel). The title 'Coalville: the Pits!', looking at the decline of coal mining at the national and local levels, was not enthusiastically received by local councillors! Attendances at conferences rarely falls below 80, and have reached 150, which can make the organisation of afternoon visits something of a nightmare.

EMIAC is celebrating its fiftieth anniversary with a special conference at Loughborough University on 14 October 1995, and the organisers are fortunate that two of the original speakers have agreed to talk to us again: Neil (now Sir Neil) Cossions on 'Industrial Archaeology: Preservation, Perspectives and Policies' and Dr Michael Lewis on research and recording in industrial archaeology. Dr Marilyn Palmer will be concluding by looking at the East Midlands over 25 years, and there will be visits in the Loughborough area, a quiz and displays of society activities.

Information about this celebratory EMIAC can be obtained from Michael Bannister, 78 Burnside Drive, Nottingham, and all are welcome. □

and the Faversham Society. Oare Gunpowder Works, by Wayne Crocrot, appears as No 39 in the Faversham Society's popular series of 'Faversham Papers'. The booklet, illustrated with period plans and photographs, costs £1.95 (plus £1 p & p) and is available from the Faversham Society, Fleur de Lis Heritage Centre, Preston Street, Faversham, Kent, ME13 8NS, ☎ 01795 53326.

# ARCHIVE

ISSN 1352-7991

Archive intends to cover the entire spectrum of industrial and transport history the length and breadth of the British Isles. Topics covered so far include East Greenwich Gasworks, the Glamorganshire Canal, Coals to Portreath, Mostyn Ironworks, The Grand Surrey Canal, Calstock Viaduct, Brodsworth Colliery, and Holman's Ironworks. The latest issue, No. 5, available from the 1st March, contains articles on The Sheffield & South Yorkshire Navigation, Part 2 of Hartley Main Colliery, A Thames Borstal, The Fintona Horse Tram and Boiler Explosions. Issue 6 will be available 1st May including articles on Kearsley Power Station and Fortis Green Waterworks.

Available at £5 per issue from selected outlets only but why not make sure of your copy by ordering direct from the address on the right at £6.50 per issue including P&P, or save £2 and subscribe for four issues at £24 including P&P. Issues 1, 2 & 3 are still available.

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## A summer project for members

Whilst on your holiday travels this summer, please pick up leaflets on any industrial museum you come across. I am compiling a database of industrial museums and sites that are open to the public in both the UK and the rest of Europe. The objective is eventually to make the information available by publication in some form. Help is sought in gathering information. At the simplest level members can collect advertising leaflets, which usually contain what is needed, but a photocopiable data input form is available.

I would be glad to hear from you at 144 Lake Road East, Roath Park, Cardiff CF2 5NQ, **T** 01222 754616.

*Michael Messenger*

## IRIS goes to Dorking

Training and recording days for the Index Record for Industrial Sites are being organised for members of local societies and groups all over the country. A typical event took place in March when around 20 members of the Surrey Industrial History Group (SIHG) gathered in Dorking. Dinah Saich, the Sites and Monuments Record (SMR) Officer for Surrey, and myself both presented the case for the IRIS initiative and its value in the enhancement of industrial archaeology within the county SMR. I then explained the IRIS recording form and the use of the word list, before we all went forward into the glorious sunshine to try it out for real. Peter Tarplee had prepared a list of buildings and features to look at in Dorking together with a location map. These included mills, waterworks, street furniture and public buildings, each with a brief resume of their history and points of interest. The group split up and we spent a couple of hours wandering around the sites completing IRIS forms before reassembling to discuss our findings.

Overall, the SIHG members found this 'hands on' experience of the IRIS form and word list far less daunting than imagined and soon gained competence in their use. The ensuing discussion centred around which sites and site types needed recording in Surrey and how to coordinate the project within the county. It was agreed that Peter Tarplee would be a central collation point for the completed forms before passing them on to the SMR, and that individuals would work on specific parishes or themes to avoid duplication. The day drew to a close and the willing participants left with feeling confident and ready to give it a go on their own.

The recording day was thoroughly enjoyable and a great success. My thanks to Peter Tarplee and Gordon Knowles for their organisation, and to all members of SIHG who attended. If you would like to hold a similar event to become involved in IRIS, please contact me at Lancaster University Archaeology Unit, Storey Institute, Meeting House Lane, Lancaster LA1 1TH, **T** 01524 848666.

*Jane Robson*

## Financing AIA activities

To enable the Association to expand its activities, a Vice-President was recently appointed with the sole task of seeking sponsorship. However, if it is to be successful, sponsorship must have very specific targets that a sponsor can identify with, such as say the IRIS initiative or the Conservation and Fieldwork awards. But there are other activities that the AIA wishes to initiate and develop, such as awarding bursaries to students or others on low income who may wish to attend the annual conference, or require financial help with worthwhile individual research, surveying or restoration projects. For these activities a fund is needed, since it may be difficult to predict from year to year what demand there may be.

This is where you as a member of the AIA can help. Most of us I am sure have over a number of years built up an extensive resource base, consisting of books, pamphlets, reports, photographs, slides, records and other archive material. Hopefully we have also made arrangements for the archive and record materials to go to a proper location, such as a record office, museum or local society.

However, what do we do about our book collection? Some of us may have a relative who is as keen as ourselves and would gladly add to their own collection. But what about duplicates or if there is no obvious relative? Do we leave it to the house clearance people or have them disposed of at a jumble sale at a fraction of their real value? Therefore, can I urge all members to make it clear in their will and to their relatives that, after their death, their book collection or duplicates are to form a bequest to the AIA? They can then be added to the AIA's own collection but, more to the point of this article, the books could be sold direct to members either at conferences or by post, or disposed of on the open market. By this means not only would the AIA funds benefit but also the books would remain in active use, furthering the study of IA. If they wish, members might specify the sorts of activities they would like

to support. And of course while this issue is being raised, why not leave a cash bequest to the AIA in your will?

Please do give this matter some serious consideration and don't forget to discuss it with your relatives. Finally, if you require further information please write to the Secretary of the AIA.

*Bill Thompson*

## Forward Plan

Copies of the *Forward Plan*, which sets out the AIA's aims, objectives and priorities for 1995, can be obtained by sending a SAE to John Powell, Ironbridge Gorge Museum Trust, The Wharfage, Ironbridge, Telford, Shropshire TF8 7AW.

## New Council members

Three new members were formally elected to Council at the AGM last September.

**JANET ATTERBURY** worked for many years in finance in the City of London. She then read History of Art at Birkbeck College, London, and subsequently joined the Royal Commission on the Historical Monuments of England in 1989. During the past four years she has been heavily involved in attempts to survey and save the archives of the coal industry in England, and now keeps a watching brief on other industrial records that are threatened by contraction, closure or alteration of the industrial base. Until a recent move to Cirencester, Janet was Secretary of the CBA, NE Regional Archaeology Panel. She now works at the RCHME's National Monuments Record Centre at Swindon, Wiltshire.

**PETER STANIER** is also the new Editor of *IA News*. Cornish-born, he has always lived and worked in the south and west of England. After working in the shipping industry at Bristol, he read Archaeology and Geography at Southampton University. A Masters degree followed at Bath, and then a period of teaching during which time he developed his interests in mining and quarrying, and gained a PhD from Southampton on the granite industry of Cornwall and Devon. Natural stone quarries (especially granite) are his great passion, but not, he is quick to add, to the exclusion of all other types of industry. He now lives in north Dorset, where he is a freelance writer and lecturer. And in case you were wondering, yes, he IS related to the railway engineer Sir William Stanier, but distantly.

**STUART WARBURTON** studied IA as part of his Geography/History degree at the City of Liverpool College of Higher Education. After a

post-graduate certificate at Leicester University's Department of Museum Studies, he worked in Nottinghamshire as a Historic Buildings Recording and Conservation Assistant, and at Bradford Industrial Museum. In 1987 he took the post of Assistant Keeper of Technology for Leicestershire Museums, and was based at the then derelict Snibston Colliery. Four years later he became Keeper of Science and Industry, co-ordinating and overseeing the creation of displays and interpretation at Snibston Discovery Park, the largest purpose-built science and industry museum since the 1950s. After it opened in 1992 his responsibilities were extended to refurbishment at the Leicestershire Museum of Technology at the Abbey Pumping Station. This is Stuart's second term of office on the AIA Council, as he resigned in 1991 to concentrate on the Snibston project. With his return he has been given the task of relaunching the AIA Conservation Award, which, depending on outside funding, he hopes will come to fruition by 1996.

## Careers in IA

The AIA often receives requests for information about vocational qualifications and courses relevant to industrial archaeology, or who a hopeful employee might approach when looking for a job. It is intended to produce a leaflet giving basic information which in the first place can be posted to enquirers. To make such a leaflet as useful as possible we urgently require current information. If you have any relevant information on job prospects or industrial archaeology courses which would be relevant for those seeking employment in IA-related fields, say in museums or for local authorities, please write to me at 127 Queen's Drive, London N4 2BB.

*Robert Carr*

## ADVERTISE IN IA NEWS

IA News now takes advertising. The publication reaches a wide readership through direct subscriptions, circulation to affiliated organisations and use in libraries.

The market reached will be attractive to publishers, tour operators, heritage consultants and visitor attractions.

Advertising rates range from as little as £45 to £200 for a full page.

All proceeds contribute to the costs of the Newsletter and the work of the Association which is a Registered Charity. Inserts may be mailed with *IA News* at a charge of £25.

For further details contact the Editor, Dr Peter Stanier.

As a subject industrial archaeology has made great strides since the 1960s. Having been regarded as the Cinderella of archaeology it has emerged as a discipline whose monuments merit detailed academic study, statutory protection and preservation. Enormous strides have certainly been made, but fundamental problems still persist and these must be addressed if industrial archaeology is to achieve the same status as more traditional periods of history.

The first line of defence for any site threatened by development is the local authority archaeologist or historic buildings officer. Many have undoubtedly raised the profile of industrial archaeology, but equally some counties still regard dirt archaeology or the study of medieval timber framed buildings as their primary concern. We have lost industrial sites of major national importance and very often the record of those sites is wholly inadequate. Had the monument been a Roman Villa, the story would have been very different.

This is now thankfully changing and with the growing employment of more sympathetic individuals and the widespread adoption of Planning Policy Guidance Note 16; Archaeology and Planning (Department of the Environment 1990), and the new Planning Policy Guidance Note 15; Planning and the Historic Environment (Department of the Environment and Department of National Heritage 1994), the future looks a little brighter. Both documents place the financial responsibility for recording sites threatened with development firmly on the shoulders of the developer; it is now up to the local authority to implement the guidance.

As recording becomes a standard condition on planning applications, the work load of archaeological contracting units will increase accord-

## COMMENT

ingly. However, there is still a dearth of field practitioners who have the necessary skills to tackle complex industrial sites, whilst the increasing use of competitive tendering means that the unit offering the lowest price almost always gets appointed to do the work. It is then the responsibility of the local authority archaeologist or the historic buildings officer, both of whom have limited experience in this field, to monitor and check that the work meets the required standard.

This then brings us to the crux of the problem, the universities. Only a handful of archaeological departments teach industrial archaeology at undergraduate level and consequently field experience has to be gained by trial and error. This problem is now being addressed as the separation between above and below ground archaeology is finally laid to rest. However, the absence of industrial archaeology from the academic syllabus means that the subject has no intellectual framework. Whilst archaeologists working in earlier periods grapple with important social questions, we remain locked in a descriptive paradigm where questions of phasing, site layout and machine transmissions continue to dominate Archaeology can offer much more than this; the architectural treatment, location and spatial patterning within and between buildings may reflect past social relationships. However, work in this important field has yet to begin. Ironically, more and more university departments are expressing an interest in the industrial heritage and this will produce more trained individuals, but more importantly, it will also develop the philosophy of the subject. Until this happens, industrial archaeology will remain a subject without definition, a subject which has yet to make a valid contribution to this crucial period of British history.

Shane Gould

## Multiple Occupancy — An 'IRIS' Conundrum

Henry Gunston

That big old place beside the stream,  
They've cleaned up recently?  
Computer firm has just moved in –  
Their new **FACILITY**.

The site was there in Domesday times  
"The dam beneath the hill",  
When grinding corn or fulling cloth  
Folk called it just the **MILL**.

Then Holroyd came – his fancy house  
Lies yonder, by those hills –  
He filled the place with worsted looms  
And it became the **MILLS**.

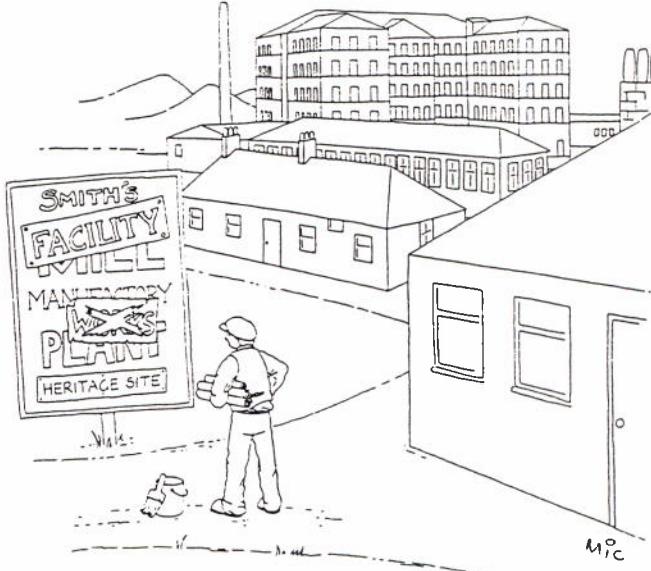
And when the textile trade went slack  
Old Jabez came, you see.  
He made small pumps, at what he  
called  
His **MANUFACTORY**.

Now Jabez' sons, they made a mint!  
Nowadays they'd drive in Mercs!  
They turned out steam pumps – heavy  
stuff –  
At their "Victoria WORKS".

Who followed them? A plastics firm.  
Recall the name? I can't.  
They were on "Workers' Playtime" once,  
And called the place their **PLANT**.

Now these new folk have spruced it up.  
With Council help? That's right,  
It has all been gazetted now  
To be a **HERITAGE SITE**.

It's seen a lot of changes, aye,  
"The dam beneath the hill",  
But if owt's wrong, us folk still say  
"There's trouble down at t'mill."



## 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.

### Safety practice

Reference 'Safety error' in IA News 92. Hard hats are compulsory on all construction sites including those where demolition is taking place and irrespective of whether those involved are RCAHMW staff or not. The photograph in question, illustrating 'Safety First', IA News 91, is therefore an excellent example of

bad practice - I wonder if anyone in the regional office of the Health and Safety Executive has seen it!

Incidentally, the Commission photographer, even if standing well clear, should also have been wearing a hard hat assuming that he/she was within the site boundary.

Michael Tutton  
London N8

### Canal du Midi

I was pleased to note the news item in the recent IA News reporting the reprint of L T C Rolt's *From Sea to Sea*. Readers interested in the history and industrial archaeology of the Canal du Midi may be interested in two recent publications which at least at the opening of the 1994 season could be purchased from boatyards serving the canal:

Philip Cucurou, *Le Canal du Midi systeme alimentaire de la Montagne Noire* (Toulouse, APAMP, 1993), ISBN 2905564296; a 36-page book-

let with excellent full colour illustrations describing the feeder systems built to supply the summit of the canal.

Jeanne Hugon de Scœux, *Le chemin que marche; Pierre-Paul Riquet, createur du canal Royal du Languedoc* (Portet-sur-Garonne, Loubatières, 1994), ISBN 2862662069; a substantial 250-page scholarly account of the building of the canal based on primary archival sources.

David Bryden  
National Museums of Scotland

## Scania Transport Trust Awards

This year's top preservation award in the Scania Transport Trust Awards scheme – a cheque for £3,000 – has been won by Britain's last working coal-fired paddle steamer, the *Kingswear Castle*. She was launched in 1924 and worked for over 40 years on the River Dart in south Devon. Taken out of active service in 1965, restoration work began in earnest six years later at her Chatham base on the River Medway. The next 14 years saw a complete restoration, thanks to the volunteer efforts of the owners, the Paddle Steamer Kingswear Castle Trust Ltd. The *Kingswear Castle* first steamed again late in 1983, and finally gained DoT class 5/6 certification for use with up to 235 passengers during 1985. She is operated in conjunction with the Paddle Steamer Preservation Society from April to October, on a mixture of charter work and public sailings. Since restoration, there has been a programme of continuous maintenance and improvement. This work is designed to ensure the vessel's operation well into the next century.

First runner-up was the National Tramway Museum, Crich, Derbyshire, and third runner-up the Vintage Carriages Trust, Keighley, West Yorkshire. In addition to receiving cash, all three prizes include a visit for representatives to the Scania Museum and transport preservation projects in the Stockholm area. The seven finalists, also receiving cash prizes, were all restoration projects as wide ranging as a steamroller, motor yacht and torpedo bomber aircraft.

The Scania Transport Trust Awards were created in 1988 by Scania (Great Britain) Ltd, the UK subsidiary of Swedish-based truck and bus manufacturer Scania, in conjunction with the Transport Trust,

## THE TREVITHICK TRUST

The Trevithick Trust is now into its second year of working for the industrial heritage in Cornwall. It came into existence in 1993 as a partnership of interested local councils, organisations and societies to act as a museum preservation body to conserve the historic industrial landscape of Cornwall. Already the Trust has acted as project manager for the reopening of the Geevor Tin Mining Museum on the coast near St Just in the far west. And from 1 April this year the National Trust has given over the management of three Cornish engines at Pool and Trevithick's Cottage at Penponds, near Camborne. Cornish engine houses are seen in many parts of

the charity dedicated to preserving Britain's transport heritage. The Awards honour and reward all forms of transport preservation in the UK. Entry is open to museums, preservation groups and individual restorers. The scheme has channelled more than £60,000 into the transport preservation movement since its introduction. During its 100+ year history of vehicle building, Scania has been involved in road, rail, water and airborne transport – hence the all-embracing nature of the award scheme. The company's commitment to preservation is shown by Scania's museum just south of Stockholm.

The Awards are presented annually to winners selected from the scheme's Interim Winners, which are named during the year. Set to continue into 1996, new entries are welcome and details can be obtained from: The Transport Trust, Hobart House, Grosvenor Place, London SW1X 7AE, (0171) 201 4233.

the world, but it is only in Cornwall that one can find fully restored and working examples. The Pool engines, which include Mitchell's Whim, a winding engine, and Taylor's 90-inch pumping engine, will soon form the focus of a major gateway centre to interpret the technology and importance of Cornish mining. This is something that Cornwall as a major tourist county has been seriously lacking. The Trust is building up a network of sites throughout Cornwall which will eventually be presented together. One other success is the saving of the unique submarine telegraph museum at Porthcurno, of which a detailed account is given elsewhere

in this issue.

The Trevithick Trust is also a member of the Cornwall Industrial Heritage Partnership, formed from similar bodies with similar aims. Following a seminar in November 1994, a Derelict Land Advisory Group has been established to draw up guidelines on how the historic and geological, ecological and landscape qualities of mining sites may be protected and enhanced. The long industrial tradition of Cornwall is now recognised as of world importance and the CIHP is working towards an application for World Heritage Site status.

## Crossness open day

There will be an Open Day at the celebrated sewage pumping station on Saturday 1 July. Crossness was part of Sir Joseph Bazalgette's southern outfall sewer for London. The four engines are (as far as is known) the largest rotative beam engines in the world. They were built by James Watt & Co in 1865 but were upgraded to triple expansion for the LCC by Goodfellow's of Hyde in 1890. They were last used in 1953 and the boilers removed three years later. The engines were abandoned to vandals and dereliction until 1985 when restoration of the ornate Grade 1 Listed Beam Engine House and one engine was begun. Additional visits can also be arranged on limited Tuesdays and Sundays, by appointment only through the Crossness Engines Trust, (0181) 303 6723 or 0132 252 2937.

## NMR in London

Following the relocation of the National Monuments Record (NMR) to the RCHME's new National Monuments Record Centre in Swindon (visited by AIA delegates during one of last year's pre-conference excursions), readers might be interested to learn of the services remaining in London. The London public search room of the NMR retains the photographic collections of buildings of Greater London, the computerised index to the building files, London material from specialist collections such as the Rokeby collection of railway stations and the Maltby collection of Odeon cinemas, together with the RCHME's Inventory files for London and Middlesex. The reference library in the search room offers a full set of RCHME publications and Survey of London volumes, in

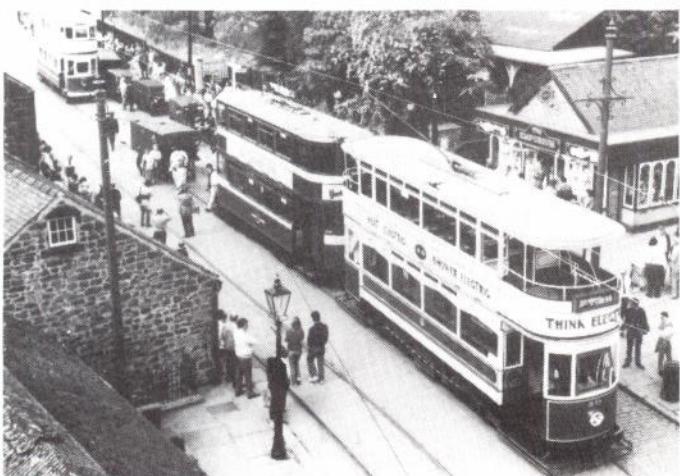
addition to general works on London architecture, history and topography. A national set of DNH statutory lists of historic buildings, lists of Scheduled Ancient Monuments and the Register of Historic Parks and Gardens for England can also be consulted. MONARCH, the NMR database of architectural and archaeological information, can be accessed and a high quality fax link connects the London and Swindon search rooms so that copies of photographs of buildings in the rest of England can be transmitted to London rapidly.

The collections can be consulted in the search room at 55 Blandford Street, London W1H 3AF (0171 208 8200, Fax 0171 224 5333). The NMR shares these new premises with colleagues working on the Survey of London (including London emergency recording) and other London survey projects.

## Downstream London

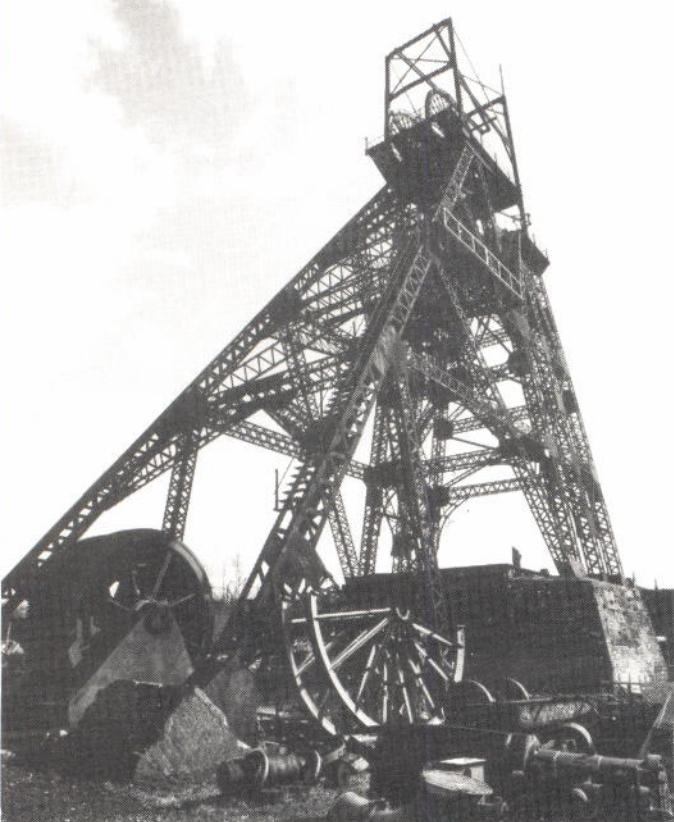
The Survey of London celebrated its centenary last autumn with the publication of *Poplar, Blackwall and The Isle of Dogs* (two volumes, £130). From a cluster of Thames-side shipyards, the east London parish expanded to become a major commercial and manufacturing quarter, embracing the world's biggest dock complex. Now transformed once again with the Canary Wharf developments of the Docklands Enterprise Zone. The survey examines the diversity of buildings, from slum courts to the model public housing of the celebrated Lansbury estate, and from music-halls and pubs to shipyards and wharves, as well as the housing and commercial developments of the last ten years.

Historically, in terms of com-



*The National Tramway Museum, Crich, first runner-up in the 1995 Scania Transport Trust Awards*

*Photo: Scania (Great Britain) Ltd*



## Coal privatised

After almost 50 years of state control, British Coal was privatised at the end of December, raising nearly £1 billion for the government. In a move hailed by the Energy Minister as 'the start of a new era for the UK coal industry,' 30 collieries were transferred to the private sector. The largest buyer was RJB Mining, which took 17 English pits with an agreement to lease an-

other three. Wales saw the only employee buyout, at Tower colliery, Mid Glamorgan. Since Nationalisation in 1947 the industry has seen the steady closure of hundreds of pits and the loss of hundreds of thousands of jobs. Twenty years ago there were still 241 pits employing around 200,000 miners, but as is well known the decline continued leaving just a few thousand miners. Although productivity has increased, markets have fallen - particu-

larity the power stations. Of course, all this has grave social and economic implications, but the prime concern to industrial archaeologists must be the almost indecent haste with which mine sites are cleared after closure, leaving not a trace. With such evidence erased it becomes increasingly difficult to believe that at its peak in 1913, 2,600 pits employed just over a million men and produced 287 million tons of coal, a third of which was exported. What has been, arguably, Britain's most important industry has been brought near to the point of extinction.

Photos: RCHME

merce and defence, the lower Thames estuary was England's most important artery. This was the subject of a one-day conference held at the Society of Antiquaries on 24 March. Organised by the RCHME, speakers examined the significance of the historic environment – including dockyards, munitions and fortifications of all periods – which has been recognised as a key element in any development of what is now known to planners as the Thames Gateway. Surveys have been undertaken by bodies including the RCHME, Kent County Council and University College, London, but much recording remains to be done.

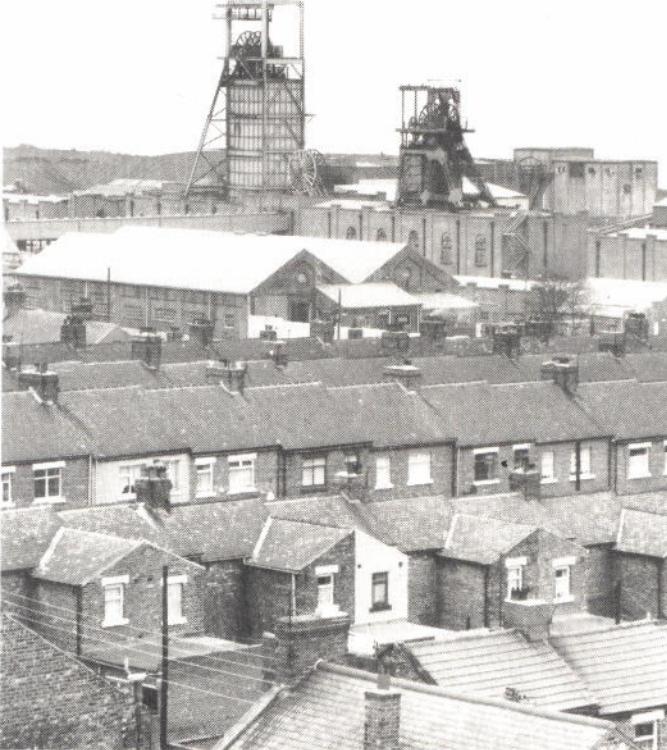
## Tally sticks

Remains of the Lancashire coalmining industry last seen 250 years ago have gone on display at the Lancashire Mining Museum, Salford, just as the region's last colliery at Parkside, Newton-Le-Willows was being demolished. As land in St Helens, riddled with redundant mine work-

ings, was being reclaimed in a £9 million redevelopment scheme, finds were made of wooden tally sticks or pins. These would have been attached to baskets of coal before being raised to the surface, thus enabling a tally to be made of each collier's output. Alan Davies, museum curator, is not aware of any other tally sticks and thinks they could be of national importance. Also a miner's pick, slightly curved from leaning against an underground wall for more than two centuries, was found during excavations at the Potato Delph workings. The finds have survived thanks to a senior construction site engineer whose mining background alerted him to the possibility of such discoveries as chemically-contaminated land was stripped away to reveal colliery shafts. It makes one wonder what has been missed on other sites.

Edwina Alcock

Lancashire colliers' tally sticks or pins dating from the 1740s Photo: Alan Davies



above left: Icon of the coal industry. Headgear at Astley Green Colliery, Tydesley, Greater Manchester  
above: The way we were. Easington Colliery and village, County Durham

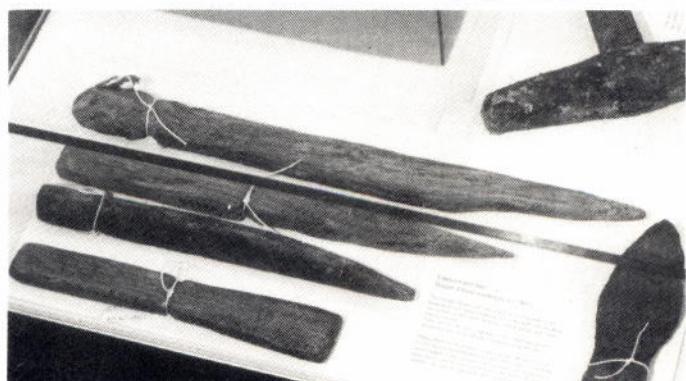
create more space. The importance of this engine is its rare survival in its original context, a factor instrumental in the Secretary's decision.

## Mills saved

Two recent planning applications which went to public enquiries have been rejected by the Secretary of State for the Environment. In Halifax, the Grade II listed Garden Street Mill (1830s), reported under threat in IA News 92, has been saved from demolition. Across the Pennines in Wigan, the owners of the early twentieth-century Leigh Mill applied to remove their 1923 steam engine to

## One year Archive

The new quarterly journal Archive has just completed its first four publications, achieving a reputation for the high quality of reproduction of its often fascinating photographs of historic industrial and transport scenes.



## New thesaurus

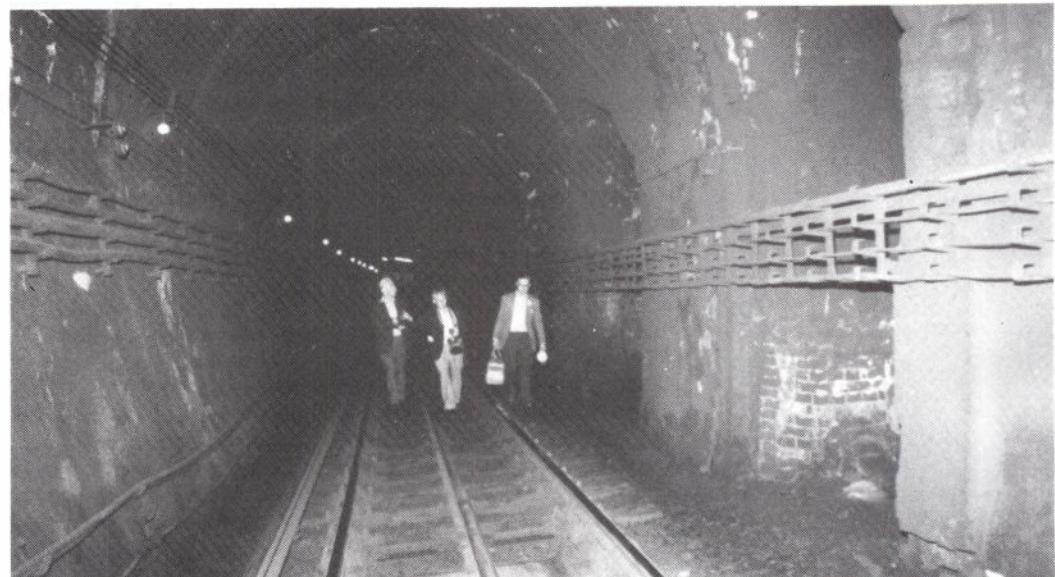
The new *Thesaurus of Monument Types* by RCHME and English Heritage was launched on 23 March 1995. It presents a standard archaeological and architectural terminology for describing monument types with the purpose of encouraging consistency among compilers of national and local monument records. This should make it easier to search for and exchange information between different systems. A computer software package is being developed.

## IA in BAN

Marilyn Palmer was profiled recently in an interview published in the CBA's *British Archaeological News* for November 1994. In it she talks of her determination to put industrial archaeology on a real academic footing. BAN (since renamed *British Archaeology*) normally concerns itself with matters archaeological from prehistoric to medieval, but this same issue devotes a double page feature to industrial archaeology and the problems of vanishing sites. The AIA's IRIS initiative gets a brief mention too.

## Thames Tunnel reprieve

Just in time, the lining of the Thames Tunnel, built by Sir Marc Brunel in 1825-43, has received Grade II\* listing. A proposal to shotcrete the inside brought a considerable response in the press, including the



above: Interior of the Brunel Tunnel under the Thames, viewed at about 2.00AM during a GLIAS visit in 1982  
Photo: R J M Carr

*Times* and *New Civil Engineer*. Work was to begin on 25 March (152 years to the day since the official opening). The tunnel's train service was due to be suspended from 25 March to 28 October 1995 while construction work proceeded to the south on the new Jubilee underground railway line and Canada Water station. Fears have been expressed that the shotcreting was to be carried out, not so much because it was essential, but because the seven months' closure gave a convenient opportunity, and it might as well be done to safeguard the tunnel well into the future. Listing now gives a breathing space during which full discussion of what is to be done can take place.

The Thames Tunnel, between Wapping and Rotherhithe, was the world's first underwater tunnel, achieved through the invention of the 'shield' upon which tunnelling machinery is still based. Used as a foot tunnel from 1843 to 1865, the East London Railway Co started running steam passenger trains through it in 1869. William Strudley's well known LBSCR 'Terrier' 0-6-0 tank locomotives introduced in 1872 were designed to operate on the ELR through the Thames Tunnel and this gave the class its unofficial name. The underground electric train service started in 1913, and up to the 1960s, British Railways' steam-hauled transfer freight trains used the tunnel at night.

If any reader has doubt as to the importance of the Brunel tunnel interior, try reading 'Ordeal by Water', chapter 2 of L T C Rolt's biography of Isambard Kingdom Brunel and look at 'Epilogue' of the same book where you will find Rolt's impression of a night visit to the tunnel. At least up to a few months ago the lining of the Thames Tunnel was essentially the same as it had been in footway times and had scarcely changed at all for the last 20-30 years.

Robert Carr

## Cromford decontaminated

The Cromford Mill Project has advanced with the reclamation of a severely-contaminated area by Derbyshire County Council for the Arkwright Society, which owns the mills. One of the largest buildings on the site, a former mill/warehouse (c.1785) became contaminated with lead and chromium during its days as a paint pigment manufactory from about 1910 to 1978. The next task for the derelict land grant contract is the removal of redundant tanks, pipelines, filtration systems and associated buildings. Buried contaminants must also be removed from beneath the yard. After this, the area will be safe for public use. Future phases will reveal water wheel pits, original yard surfaces and the outline of Sir Richard Arkwright's great

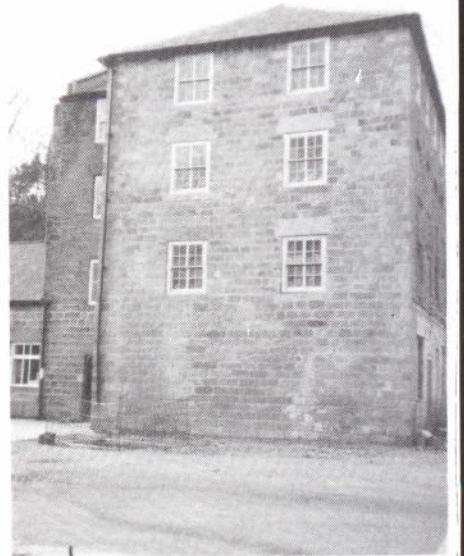
second mill of 1776/7. The final phase will involve clearing and repairing the main underground culvert.

The Cromford Mills complex, where in 1771 Arkwright established the world's first successful water-powered cotton spinning mill, is now recognised as a key international heritage site. It was acquired in 1979 by the Arkwright Society, which

has since rescued most of the buildings in a £3 restoration programme for use as shops, offices and a tourist attraction.

far left: Cromford Mill during decontamination work centre and below: before and after restoration work on the gable end of Cromford Mill

Photos: Arkwright Society



## Scotland

One of the most important pieces of news to emerge from Scotland is that British Coal's plans collection at Newbattle was transferred to the Scottish Record Office in January 1995. With the disappearance of British Coal after privatisation, there had been concern that the 47,000 plans might be in jeopardy. Although a further 12,000 abandonment plans have gone to the new British Coal Authority in England, aperture card copies formerly available for consultation in Edinburgh have now been transferred to the British Geological Survey on the other side of the city. Meanwhile, the fate of 'Centris', the last part of British Coal's archive service, remains to be seen. As for the industry itself, deep mines have been reduced from 187 in 1947 to two in 1995, with the previously moth-balled Frances Colliery now scheduled for full closure.

Elsewhere in the world of industrial records, there is uncertainty and confusion caused by the privatisation of British Rail. However, photographic and documentary collections relating to the Scottish electricity industry have been donated to the Royal Commission on the Ancient and Historical Monuments of Scotland, and this material is now available for public consultation.

Amongst a number of noteworthy preservation projects, the Arrol and Cowan & Sheldon giant cantilever cranes in Greenock and Glasgow (Stobcross) have received grants from Historic Scotland. Other planned schemes include the Garlogie beam engine in Aberdeenshire and Shira Mill on Fair Isle. Important conversions of industrial buildings include Slateford Maltings in Edinburgh, St Monance Windmill (and salt pans) in Fife, and Perth Waterworks, the latter receiving a prize from the Royal Institute of British Architects. However, perhaps most encouraging has been the successful completion by Professor Roland Paxton (Institute of Civil Engineers and Heriot Watt University) of a million-pound funding package to save and refurbish Laigh Mill Viaduct near Kilmarnock in Ayrshire. Built in 1811 as part of the Kilmarnock & Troon Railway, it is thought to be one of the oldest surviving railway viaducts in the world.

On a negative note, the impending re-organisation of local government in Scotland, which is due to come into operation in 1996, is causing concern at several levels, not least of which is the long-term fate of the heritage-based services previously provided by the upper-tier Regional Councils now facing abolition.



*The early reinforced concrete Sentinel Works, Glasgow, lies in the proposed path of a motorway*

*Photo: RCAHMS Crown Copyright*

tion. Also, hard on the heels of the controversial M77 motorway has come the M74 extension, to provide relief for the failing Kingston Bridge. Unfortunately, the proposed path along the south side of the Clyde will destroy several of Glasgow's finest industrial buildings, including the Sentinel Works in Jessie Street, which is thought to be one of the oldest surviving reinforced concrete (Henebique) multi-storeyed factories in Britain.

Other aspects of transport continue to attract attention. Perhaps most prominent has been the news that British Rail are to close the Highland sleeper and motorail service. Further suspicions have been aroused by Railtrack's failure to maintain previous levels of maintenance on the Forth Bridge, and there may be plans to shut the West Highland line entirely. On a happier note, however, British Waterways hopes to acquire £100 million of lottery money to restore navigation between Grangemouth on the River Forth and Bowling on the River Clyde. This will require reinstating parts of both the Forth & Clyde and Union Canals. / Miles Oglethorpe

## North West England

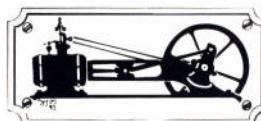
From the Manchester area David George reports that the tall Dunlop-Macintosh Building (1860s period), on Cambridge Street adjacent to Chorlton New Mills (1814), has been cleaned and converted to student apartments. Havelock Mill (c1825-44) in Great Bridgewater Street, which comprised silk and cotton sections, is advertised as acquired for refurbishment. The mill was described in IA Review, Vol XVI, No. 1, Autumn 1993. There are moves to re-instate sections of the Manchester and Salford Junction Canal, a bypass canal abandoned in the 1920s. Granada TV have restored the en-

mon Lock. Having featured in a number of early prints as a foreground to views of Stephenson's Viaduct, this is perhaps the most historically significant lock on the whole canal. Following a great deal of practical work at the site and lengthy behind-the-scenes discussions, St Helens MBC now has a plan for the partial restoration of the lock, as intended by SCARS, and has applied for funding to carry out the project.

Offers are in at present from City of Salford and at least one other individual for Boothstown Mines Rescue Station (see IA News 89). City of Salford hope to transfer the Lancashire Mining Museum at Buile Hill Park to the old station, which still contains the old training tunnels. The other interested party has a business producing 'bobble hats' of some kind. It is thought at present that Salford's bid will not be successful. At Wet Earth Colliery, Alan Davies (curator of Lancashire Mining Museum) has been completing the text of 18 interpretation boards, of various features on site. The powers that be have decided the park's Countryside Warden Service may edit and design the boards, deciding how much and what is said about each feature - Alan's comments are unprintable! The end result should be, if anything, interesting.

The Lancashire Mining Museum recently received documents from the Western Area offices at Staffordshire House, Stoke-on-Trent. These included around 20 large plans of the workings of ex north-west collieries in relation to subsidence on the surface. The archives included correspondence relating to the flooding of the collieries in Westhoughton in the 1930s, as the Wigan Coal & Iron Co ceased pumping in the area. It appears that the company sent out spies to Westhoughton to find out what the water levels were in their workings!

*Edwina Alcock*



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### CONSULTANTS AND CONTRACTORS IN THE RESTORATION OF HISTORIC MACHINERY

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## DIARY

**17 June 1995**

### EAST OF ENGLAND REGIONAL IA CONFERENCE

based in the Thetford area. Details from Brenda Taylor, Crown House, Horsham St Faith, Norwich NR10 3JJ **T** 01603 897912.

**14-17 July 1995**

### NAMHO 95

weekend conference of the National Association of Mining History Organisations, at Newport, Shropshire. Large SAE for details from Adrian Pearce, 72 Hopkins Heath, Shawbirch, Telford, Shropshire TF5 0LZ **T** 01952 405369.

**19-25 August 1995**

### INTERNATIONAL SYMPOSIUM ON SOUTERRAINS

six full days studying aspects of underground quarrying in and around Maastricht. Details from International Symposium on Souterrains, c/o P.J. Orbons, PO Box 1614, NL 6201 BP MAASTRICHT, Netherlands.

**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 Sue Robinson, Conference Organiser, Museums Association, 42 Clerkenwell Close, London EC1R 0PA, FAX 0171 250 1929.

**22-24 September 1995**

### HISTORIC FARM BUILDINGS GROUP CONFERENCE

based at Withersdale 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, **T** 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 Lądowego, ul Gabriela Narutowicza 11/12, PL-80952, Gdansk, Poland.

**14 October 1995**

### EMIAC 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.

**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 **T** 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 **T** 01283 702299.

**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.

# AIA

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Designer: John Stengelhofen

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- 30 September for November mailing
- 30 December for February mailing
- 30 March for May 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 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 **T** 0195243 3522.

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



*Paddling on the Medway. The prestigious 1995 Scania Transport Trust Award for preservation has been won by the steamer Kingswear Castle*

See article on page 8

Photo: John Goss