

BULLETIN 3.1

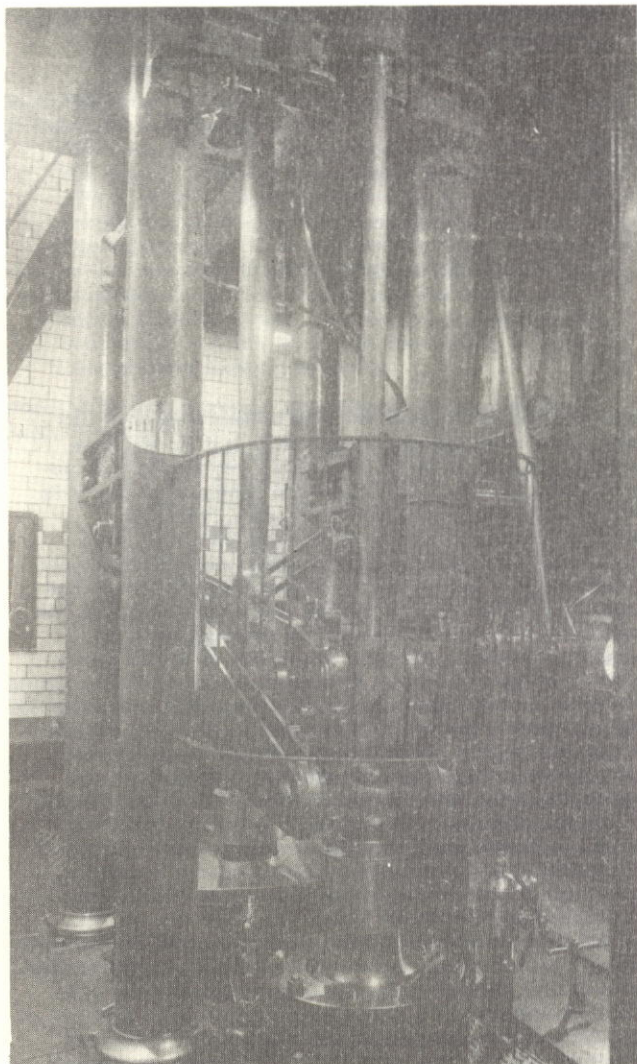
JULY, 1976

GRASSHOPPER RESCUED

The preponderance of the horizontal type among preserved textile mill engines reflects the general preference for this layout when space was not at a premium in the engine house. Nevertheless, vertical steam engines were still being installed in some mills late in the nineteenth century and when an example, thought to be unique among surviving engines in having a grasshopper beam, came up for disposal recently, some quick intervention by local enthusiasts was necessary to prevent it being cut up. The engine in question, which worked at Edwin Shaw's Clough House Mill at Slatwaite in

Yorkshire was the first engine made by Schofield and Taylor of Huddersfield, and probably the last large example of its type to be made. It was installed at the Clough House woollen mill in 1887, and worked until the mid-1960's when electric drive was installed. Working steam pressure was 130 p.s.i. and the engine is unusual in being built as a compound, rather than converted from simple working as were many other beam engines. The flywheel was mounted above the beam and drive to the mill machinery was both by gear-and-shaft and by a rope race.

The engine weighs fifty tons. A generous private loan enabled the South Yorkshire Trades Historical Trust to secure the engine for preservation. The present owners of the mill have agreed on a 'stay of execution' on the earlier proposal to remove the engine for scrap, and members of the Sheffield Trades Historical Society, the Northern Mill Engine Society and the Colne Valley Society are presently co-operating to dismantle the engine and remove it within the six months allowed by the mill owners. It is proposed to re-erect the engine in due course for public display at Wortley Top Forge on the outskirts of Sheffield.



By Courtesy of George Watkins

THE BASFORD BEAM ENGINE AT NOTTINGHAM INDUSTRIAL MUSEUM

Early in the 1960's the Nottingham Corporation Water Department decided that the remaining 100 year old Cornish compound rotative steam pumping engines at their Basford pumping station in the northern suburbs of the City were reaching the end of their useful working lives, and the decision was made to replace them with vertical spindle, variable speed electric pumps. Several interested people then made representations to the civic authorities to ensure the preservation of these splendid examples of mid-19th Century municipal engineering. On-site preservation was not practicable for a variety of reasons and eventually one of the pair was offered to the City's new Industrial Museum at Wollaton Park, who undertook to dismantle and rebuild the engine at the museum. The task of carefully taking the engine apart, labelling all the bits and pieces and removing them to temporary storage at Wollaton and at the City Engineer's depot fell to the Arkwright Society — a volunteer group of engineering enthusiasts led by the ever-resourceful EX-REME Colonel Frank Tatham. This body of stalwarts also carried out much of the re-assembly of the engine and were joined in this task in August 1974 by the Dorothea Restoration Engineers Ltd., working for Nottingham City Museums under the Midlands Area Service Agency scheme. The Dorothea boys — or 'the Cloggies' as they became known from the idiosyncratic but eminently suitable choice of footwear of at least one of their number — did sterling work on the later stages of the assembly and all the finishing operations on the engine.

The engine, which was opened to the public on 12th June, 1975, has been re-erected in one of the outside yards at the Industrial Museum which is housed in the 18th Century stable block of Wollaton Hall. What is effectively a gigantic architect-designed steel and glass case has been built around the engine, part of which lies below ground level in a deep concrete-lined pit whose walls are chock-full of steel reinforcement (Wollaton Park is in an area subject to subsidence because of old mine workings). The visitor can

examine the engine from various vantage points, as viewing platforms linked by open staircases have been constructed at ground level, cylinder head level and beam level and one can also descend to the base of the 18ft. diameter flywheel.

The decision to build an uncompromisingly modern house for the engine was a controversial one, especially as Wollaton Hall and its dependencies are listed buildings. But most visitors agree that the bronze-tinted glass and dark-brown painted steel harmonise very well with the mellow brick and slate roofs of the older buildings surrounding it; and an anonymous skeletal structure was preferable to any attempt to "keep in keeping" which would almost certainly have fallen between two stools. The reproduction of the original ornate brick-and-stone Jacobean engine house would have been prohibitively expensive and would have looked really rather odd out of its original context of ornamental cooling pond, dark laurels and cedars, lawns and gravel walks. Another of Nottingham's old steam-powered pumping stations with a later and even more ornate pair of beam engines has been preserved intact near Papplewick off the Mansfield Road, and there the whole complex of engine house, boiler house, cooling pond, superintendent's residence and extensive Arcadian grounds is being conserved and administered by a charitable trust.

At present the Basford Beam Engine is on show as a static exhibit but it is hoped that it will be steaming - though not pumping - in the not-too-distant future. To this end a rather unusual water-tube vertical boiler has been acquired - the original Lancashire boiler could not unfortunately be preserved - and the Museum's volunteers are currently engaged in extending pipework and installing a cooling tank.

THE LEICESTER EXTRA MURAL CERTIFICATE IN INDUSTRIAL ARCHAEOLOGY

The Adult Education Department of Leicester University has for many years offered courses of part-time (mainly evening) study open to all and leading to the award of University extra mural certificates in a variety of subjects. Archaeology has been among these for many years but a growth in demand has prompted the Department to make a new departure and to offer from September 1976 a three year course at Vaughan College, Leicester, leading to the award of an extra mural Certificate in Industrial Archaeology. The general aims of this course will be to provide a comprehensive introduction to industrial archaeology mainly of the period 1700-1900, and in so doing to strike a balance between the academic and practical aspects of the subject. To this end, there will be two 1½ hour sessions on one evening of the week; one of these will be devoted to matters of historical background, to enable the relics of the industrial past to be set in their correct perspective, and to particular themes in industrial archaeology such as power, extractive industries, and transport, with the intention of imparting sufficient technical knowledge to facilitate the understanding of industrial monuments. The other evening session, supplemented by outdoor weekend work, will be spent in considering the techniques used in industrial archaeology - recording of all kinds, work in the field, the techniques of documentary research, questions of the preservation of industrial monuments - leading in the final year to the completion of group or individual projects. The work of the students will be assessed by means of written assignments, examinations and the completion of practical tasks. Further details can be obtained from: The Staff Tutor in Archaeology, Department of Adult Education, University of Leicester, University Road, Leicester LE1 7RH.

ROTHERHITHE WORKSHOPS

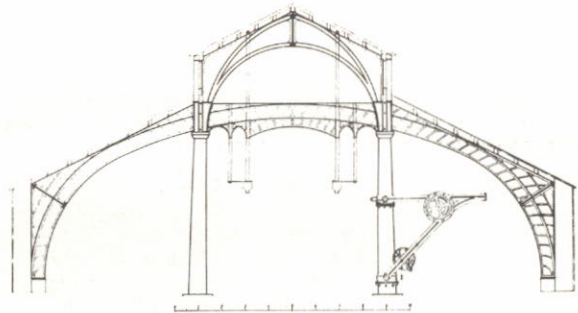
Rotherhithe Workshops is a consortium of craftsmen, designers and others who licence premises at Hope (Sufferance) Wharf, Rotherhithe. The Wharf, a small group of characteristic 19th century warehouses set in an outstanding Conservation Area, is being restored and converted into workshops by the Industrial Buildings Preservation Trust.

Tenants already in occupation include an art potter, the Rotherhithe Pottery and two silversmiths. The Riverside Studio is at present under construction and will provide space for exhibitions, dancing tuition and theatre workshops. Further buildings will be converted to form space for workshops for a wide range of craftsmen a community workshop and a design centre.

For further information contact: The Industrial Buildings Preservation Trust, Hope (Sufferance) Wharf, 61 St Marychurch Street, LONDON SE16. Tel. Trust Office 01 237 8944, Site Office: 01237 5272

THE SAYN IRONWORKS

In 1769/70 Clemenz Wenzislaus, Elector of Trier, founded the Ironworks at Sayn, in the neighbourhood of Koblenz and on the western slope of the Westerwald. For its time it was an efficient foundry with two furnaces. The economic conditions were favourable, with charcoal and iron-ore in the immediate vicinity, while the river Sayn brought enough water to fill the furnace pools, which fed the waterwheels working the bellows, hammer works and stamping machines. After initial prosperity came recession with the wars of the French Revolution, a period which brought no advances in building or in technology. Then in 1815 the Sayn Ironworks came to Prussia. New commissions were now given, because, after the destruction of the Napoleonic period, Koblenz and its extensive ring of fortifications were to be built up again. For the modernisation of the Ironworks Carl Ludwig Althaus (1788-1864) came to Sayn in 1817. The first enlargements to the building started at once, in order to gain more room for large castings. Thus the neo-classical building was erected; new workshops and houses were also provided. Every sort of architectural casting, implements, machines and, not least, the casting of cannons and cannon-balls were required from the Ironworks. At the same time art castings became important. The first New Year's plaque of 1818 (they were cast every year with varying motifs until 1864) shows on the left the products of the Sayn Ironworks and on the right, on an unrolled plan, the Ehrenbreitstein fortress with the goods-lift running on rails.



Textabb. 8: Sayner Hütte, Gißhalle. Querschnitt durch das Langhaus.

The famous cast iron foundry hall is the brilliant creation of Carl Ludwig Althaus and was completed in 1830. It is the first open-plan factory building in the world to have a load-bearing construction consisting entirely of cast iron and to stand pavilion-like on its own. The walls only serve to delimit the space. The hall is positioned in front of the broad furnace area, consisting of one large blast-furnace. Two open-hearth furnaces and one cupola were also available. A novelty in this three-aisled hall is the combination of cast iron and glass, used for the first time in large quantities. The lantern raised above the middle aisle, the clerestory taken the full length of the building and the fine west facade, all in glass tracery, achieve a new mode of lighting. The central aisle of the 1830 building had six pairs of columns. In 1844 the building was lengthened (without a break in the form of the construction) by the addition of a further three pairs, their elements being cast from the old moulds. Between the columns was placed a travelling crane, conceived in the original plan, which could move loads of up to 24 tons along the hall, likewise firmly attached to the building are six (formerly eight) ball-bearing bracket-cranes with a turning circle of 360°. In 1865 the firm of Krupp took over the Sayn Ironworks. The addition of a new hall at right angles to the old meant the destruction of the fine western facade. The travelling crane was extended along the new hall to reach the workyard outside the building. The blast-furnace was shut down in 1878, although casting continued until 1926. Since then the building has sunk into ruinous condition.

A detailed and illustrated account, by Joseph Roder, of the ironworks is the subject of the *Jahrbuch für Westdeutsche Landesgeschichte*, Vol. 1, 1975, available from Frau Gertrud Roder, Landesmuseum, Festung Ehrenbreitstein, 54 Koblenz, W. Germany.

NEWS FROM THE GROUPS

West London IA Society, Secretary: M. A. Stimpson (AIA)
n.b. "Spirit of 84" c/o 83 Sunny Bank Road, Potters Bar, Herts.
This group runs an active programme mainly of transport interest with recent visits to Dudley Canal Tunnel and the Regents Canal.

Greater London IA Society, Secretary: Brenda Innes, (AIA)
9a Upper Park Road, Bromley, Kent.
The frequent newsletter of this group is always full of a wide variety of IA topics. Recent trips have been made to Temple Mills Waggon repair shops, Croydon Gas Works, the Wembley Exhibition and Walton on Thames and Kempton Park Pumping Stations.

Exeter IA Group, Secretary: Roger Eckersley (AIA), 26 Sylvan Road, Exeter.
Exeter, Kingsbridge and Tiverton have been the locations for recent field trips. Research still continues on Shillhay and as a result they have been able to assist the BBC with the production of the Onedin Line!

Somerset IA Society, Editor: Brian J. Murless, 15 Gordon Road, Taunton, Somerset.
This Society has just produced the first edition of its Journal which can be obtained from the Editor at 50p plus 15p p&p. With a good range of articles, high quality typography and line drawings, this first edition sets the standard for many others and for themselves. Featured are research work on the Bath Brick industry of Bridgwater, the Withy Industry, Horse Gins in Somerset, a Cornish Boiler at Highbridge and many other topics. Like many agricultural areas the Society draws no dividing line between agriculture and industry and the Journal reflects this happy arrangement.

The Cromford Canal Society: Secretary: S. S. Stoker, Bank House, West Bank, Winster, Matlock.
The first issue of their quarterly newsletter "Diggum", contains news of the Society's work at Cromford Wharf and the pumping Station. The restoration of the engines and house are being carried out in partnership with Derbyshire County Council and it is hoped to be in steam shortly.

South East Wales IA Society, Secretary: W. Gwynfar Hughes (AIA)
96 Wenallt Road, Rhiwbina, Cardiff.
Vol.2, No.2 of their Journal was produced to coincide with the Annual Conference of the West of England IA Societies which was held in Cardiff this year. The articles include, Ironworking at Maesteg, the Glamorganshire Canal, the Cwm Dee Rail Road and Velin Vach Colliery. The previous edition of the Journal also contained much on such Welsh industries as mining, ironworking, crucible steel manufacture and copper extraction as well as two articles on Canadian Railways and IA in South Africa. The line drawings in these Journals are of exceptional quality.

Bristol IA Society, Secretary: Mr. J. Powell, 18 Upper Belgrave Road, Clifton, Bristol.
The highly professional publications of this Society and the full calendar of events and lectures are an example for other IA Societies to follow. The 1975 Journal contains articles on the Railway Monuments of Avon County, The Somersetshire Coal Canals, Shortwood Brickworks, Fussell's Ironworks, John Padmore Cranes, the Stothert and Pitt Steam Fairbairn Crane, Blind backs for Brassworkers, Mills of the Monnow and Troddi Basins and BIAS news and notes. Well worth the sub of £2.00 per copy.

South West Wales IA Society, Editor: P. R. Reynolds c/o The Library, University College of Swansea, Swansea.
The frequent newsletter of the group is both informative and readable. Apart from the usual list of future events and short reports on current work, there are useful sections on recent publications of IA interest in Wales and informed comments on the local authority planning scene. The group is actively associated with the preservation of historical sites which is not always easy in an area with a large amount of derelict land and difficult political pressures.

Gloucestershire IA Society, Secretary: Amina Chatwin (AIA)
6-7 Montpellier Street, Cheltenham.
The 1975 Journal is largely devoted to the History of paper-making in and near Winchcombe and a New History of Gloucestershire. A particularly interesting article is that by the Rev. W. Awdry (remember Thomas the tank engine?) on Eastgate Station and a brief feature on the iron framed buildings of Portsmouth Dockyard by I.M.Parsons.

Derbyshire Historic Buildings Trust
The Trust has been established to restore and conserve those historic buildings in Derbyshire threatened with destruction. Education, research and publicity will be the main aims of the Trust but they will also take part in restoration work where buildings cannot be restored by the owner. This will be financed by a revolving fund. For further details write to the Secretary, Denis Knight, Stalisfield, Wishingstone Way, Matlock, DE4 5LU.

The Transport Trust
"Travel Back", the latest edition of the Transport Trust Bulletin, whilst primarily intended for the transport enthusiast, contains several articles of interest to the Industrial Archaeologist. Featured is the disastrous B.R. scheme for Liverpool Road Station, the history of the Kew Bridge Pumping Station and the story of the British Baby Carriage collection housed at Bettenham Manor, Biddenden, Kent (telephone Biddenden, 291343).
Membership of the Transport Trust, 18 Ramillies Place, London W1V 2BA, now entitles one to enter over 80 Transport sites at reduced admission.

The Arkwright Society (c/o Tawney House, Matlock, Derbyshire, DE4 3BT).
Continuing their ambitious programme of restoration, education and promotion, the Arkwright Society are offering a series of events, excursions and visits during the summer and autumn. Sites to be visited include the Leeds and Liverpool Canal, Abbeydale Museum Bakewell and Buxton Railway.

Humber Packet (Secretary, No.1 Jarratt Street, Hull)
The Humber Paddle Steamer Group formed in 1973 under the pressure of the construction of the new Humber bridge, are dedicated to the preservation of the Humber ferry "Lincoln Castle". Their bi-monthly magazine contains much of interest in the maritime preservation field.

UNIQUE MINE PUMP REDISCOVERED

The development of reasonably-priced and dependable self-contained underwater breathing apparatus in the years following World War II paved the way for the rapid advances in underwater archaeology in the past decade. There is now known to be almost an embarrassment of virtually untouched sites beneath the water, both around the British coasts and further afield, sufficient to keep archaeologists busy for decades even should no fresh sites present themselves for excavation in the meantime.

A separate set of techniques is similarly beginning to emerge in the case of what might be called subterranean archaeology, although in this case the growth of the pursuit is not so much due to any fundamental breakthrough in the development of the equipment used by its practitioners, as to an improved knowledge of the layout of the adits and shafts of individual mines now that local researchers are getting to grips with the mountains of contemporary record material deposited with local archive offices and elsewhere. A possible contender for the title of Britain's most inaccessible industrial monument is a water-pressure engine discovered recently by members of the North Staffordshire Mining Club when they were exploring the Wills Founder lead mine complex at Winster in Derbyshire. The engine, which dates from 1819 is approached by a 400' vertical shaft from the hillside above, and members of the Peak District Mines Historical Society have been having themselves lowered down by bosum's chair to examine the engine and investigate the possibility of bringing it back to the light of day, possibly for display at a proposed mining museum in Buxton. The engine is marked as having been made at Coalbrookdale and is thought to have worked for about 20 years at the Blithe mine at Alport before being moved to Winster where it was installed about 1840 by Cornish mining engineers. Records show that the mine there was last worked in 1867 since when this remarkable pumping engine, believed to be unique in Britain, had lain idle.

Members of the Peak District Mines Historical Society have collaborated to produce a remarkable set of measured drawings of the engine; remarkable for the conditions under which the data was gathered, for the wooden shelf on which the engine sits is thought to be totally unsupported along one side where the principal joists have rotted away, making survey work hazardous to say the least with the possibility of 100' of flooded shaft below. Endurance on the site is limited by the fact that icy water cascades onto the engine from 40' above, where once a spring was tapped to supply water with the necessary head to work the engine.

The water level in the shaft presently extends to just below the wooden platform on which the water balance engine sits. But the two pumps which it operates may be as much as 100' further down the shaft, and the Society plans to arrange for large-capacity motor pumps to be brought onto the site to lower the water level so that more can be ascertained about the size and condition of the pumps. Local press publicity for the discovery resulted in a local contractor offering to raise the machinery to the surface without charge to the Society provided the job can be done during the present year, while the necessary plant is not required elsewhere.

Some dismantling in situ will be necessary before the water pressure engine can be brought up the shaft. Individual components are at present difficult to recognise because of the thick layer of clay that has built up all over the machinery since it was assembled in the shaft. But investigations so far suggest that the engine is still virtually complete. If the plans to re-erect it for public exhibition nearby in Derbyshire succeed, we shall have another reminder that, important as steam engines have been in draining mines in the past 200 years, water power was at least equally important in both the pumping and winding roles where the topography was suitable and coal was not plentiful.

If this bid succeeds, how long will it be before we read of an appeal for support for an expedition to Peru to search for the remains of the high-pressure pumping engines set to work at the silver mines at Pasco by Richard Trevithick in 1816, some of which were dismantled and the parts thrown down the shaft when the country was swept by revolution a few years later?

NEW BOOKS

SOPWITH'S MAP OF THE FOREST OF DEAN 1835, pub. 1976
The Pound House, Market Square, Newent, Glos. GL18 1PS.
60p + 6½p postage.

A valuable little map, produced by AIA member David Bick, which will be most useful to those interested in the history of mining and ironworking.

BRICKS AND MORTAR, THE BUILDING OF TOWER HAMLETS, 1976

Foreword by Geoffrey Fletcher, obtainable from the Central Library, Bancroft Road, London E1 4DQ.
60p + 12p postage.

A guide to buildings of historic and architectural interest in the Borough. Contains over fifty photographs. Lacks a map.

THE LOCAL AMENITY MOVEMENT - CIVIC TRUSTS CONTRIBUTION TO HABITAT, 1976

Published by the Civic Trust, 17 Carlton House Terrace, London SW1Y 5AW.
£1.00 post paid.

A guide to local amenity societies in Great Britain compiled from questionnaires sent out to 1,135 societies. Of great use to those interested in planning matters of any description.

A POCKET HISTORY OF RICKMANSWORTH, 1976

ILLUSTRATED GUIDE TO HISTORIC RICKMANSWORTH, 1974
Both by E. V. Parrott (AIA), 25p. from 66 The Queens Drive, Rickmansworth, Herts.

Useful guides to this area although (not surprisingly!) containing little of I.A. interest.

HUMBERSIDE LOCAL STUDIES QUARTERLY, No.3, March 1976.

Published by Humberside Libraries

The whole issue is devoted to John Harrison (1693-1776), the celebrated clockmaker and solver of the longitude problem. Contains a fine bibliography and short history of his life and work.

A SCRAPBOOK OF HARNESS DECORATIONS, Terry Keegan, 1975.

Published by Terry Keegan, The Country Centre, Clows Top, Kidderminster.
£1.30.

For all lovers of the heavy horse, this 66-page booklet containing 500 designs of harness decorations is a must. As trade catalogues of any description are now so scarce, any form of reprint must be highly praised.

WALKS IN THE SEVERN GORGE, Ironbridge and Coalbrookdale Society.

1976, obtainable from the Ironbridge Gorge Museum. 30p.

Although town trails are now a little outdated, for those lovers of Ironbridge who have seen the normal tourist sites, this guide to the village itself and its little-known alleyways is invaluable.

THE AIA ADULT EDUCATION COMMITTEE

An ad hoc committee to discuss matters concerning further education and IA has met three times since May 1975. It consists of Prof Owen Ashmore (Manchester), Dr Edwin Course (Southampton), Harry Frost (London), Dr Michael Lewis (Hull), Dr Stafford Linsley (Newcastle), Michael Rix (Birmingham), Dr Jennifer Tann (Aston) and Bryan Woodriff (Kingston Poly). Its business has concentrated on three main areas.

1. There is a considerable demand for some kind of qualification for industrial archaeologists, both from potential employers such as museums and planning departments, and from students themselves. The AIA should press for as many qualifying courses as possible - extra murally, inside universities (especially at postgraduate level), in Polys, and so forth. Since however it cannot organise such courses itself, nor has it any power to impose standards on those bodies who can run them, all it can do is, through the committee, to encourage certificate or diploma courses and to offer its advice on their content. It is hoped that the guidelines we can offer will ultimately bring about an approximately standard level, although details will inevitably differ between courses. So far, Leicester is offering a University Extension Certificate course; one is under negotiation at London University; and a trial run for an internal certificate course is planned at Kingston Polytechnic. Anyone with plans for such a course is urged to get in touch with the committee.
2. Nobody knows how many extra-mural, higher and further education classes are provided throughout the country, nor how many students attend them. It would be useful to know - and to know where the gaps are - and a questionnaire is therefore being produced for distribution to organising bodies, asking for details of such courses in the 1976/77 session. We do not know who most of the tutors are, and therefore cannot contact them direct; and if any tutor has not received a questionnaire via his organising body by the end of the year it would be much appreciated if he would ask Bryan Woodriff at Kingston Polytechnic, Penrhyn Road, Kingston upon Thames, Surrey, for a copy to fill in. The more comprehensive the survey the better. Results will be published in the Bulletin and offered to the educational press.
3. The AIA is becoming the national body for promoting IA, its teaching and practice and we feel that we should inform teachers and educational bodies that we exist, and be ready to answer the queries of those who are interested in IA and willing to include it in their teaching programmes, but who are unsure about what resources are available. We are therefore planning an Educational Advisory Service which would run in liaison with the Schools Education Committee and would offer advice on such matters as what suitable books or films are available and who the local experts are who could be approached for advice on fieldwork projects or for lectures. Likewise, since there is a growth of modular CNAAs degree courses in Polytechnics and IA is likely to become one module, the AIA should be in a position to suggest suitable evaluators for the syllabus. But much ground-work is needed before the service is launched. Any suggestions about topics which the committee could usefully discuss are welcome: contact Dr Michael Lewis, University of Hull.

MEMBERSHIP MATTERS

Would the member who has an account at the National Westminster Bank Ltd., Tottenham Court Road Office, London, please contact the Secretary as there is some confusion over his/her banker's order.

AIA Bulletin is published six times a year by the Association for Industrial Archaeology. The Association was established in September 1973 to promote the study of Industrial Archaeology and encourage improved standards of recording, research, publication and conservation. 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 interest of Industrial Archaeology at a national level, to hold conferences and seminars and to publish the results of research. Further details of the Association and its activities may be obtained from the Secretary, Association for Industrial Archaeology, Church Hill, Ironbridge, Telford, Salop, TF8 7RE, England (095-245 352).