ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

AIA Bulletin

VOLUME 7 NUMBER 1 1979

picture by Douglas Hague

Clevedon Pier 1979

The formation of a **National Piers Society**, about which Lady Elton writes elsewhere in the Bulletin, comes barely in time to secure the preservation of some of the last and finest examples of this quintessentially British institution. Sir John Betjeman spoke movingly and evocatively of the attraction of the pleasure pier 'where you can get fresh air without getting run over, where you can be at sea without being seasick'. In their associations with the seaside and with childhood holidays, piers have a popular appeal, yet only now is there more serious significance in the history of civil engineering being recognised. Ryde Pier, for instance, was first built in timber in 1813-14, more than 150 years ago, and this 1250 ft long structure is substantially incorporated in the later multiple pier which still stands and provides the principal landing for ferry passengers from Portsmouth. Southend Pier is only slightly younger, having been built in its earliest version in 1829-30 and rebuilt with cast-iron piles in 1888, since when it has maintained its reputation as the longest pier in the world. The debt owed by railway engineers to the men who built these Victorian piers has yet to be assessed, but many of the finest iron railway bridges undoubtedly benefitted from the experience of pier engineers like Eugenius Birch, James Brunlees and their contemporaries. Thomas Telford and the Rennies were also involved with the early years of pier design, a measure of the stature which this branch of the civil engineering profession enjoyed.

But, like other monuments of Victorian engineering, piers cannot last for ever, and nearly half of those which saw the death of Victoria in 1901 have gone. Some were dismantled when changing tastes made them uneconomical, some were blown up in the course of wartime exercises and others have continued to succumb to the rigorous environment of salt-laden air, winter gales, mishandled ships and lack of proper maintenance. Brighton's West Pier, recognised as the finest of Eugenius Birch's seven piers spanning 25 years was closed as unsafe shortly after being recommended for Grade I listing in 1975. Saltburn's elegant pierhead, originally cast-iron but rebuilt in mild steel in 1930 was damaged beyond repair in a 1974 gale. Southend pier was repaired with more than 14 miles of 10" wide teak decking in 1976-7 but a serious fire at the pierhead and subsequent deterioration have prompted the closure of its remarkable passenger railway. Perhaps the saddest case is that of Clevedon Pier, built in 1867-8 with second-hand Barlow rail from the South Wales Railway and distinguished with a Grade I listing as the most graceful of all British piers. Having survived more than a century of natural hazards, Clevedon Pier suffered the loss of two of its spans in 1970 following a well-intentioned but ill-conceived test loading. Repair was beyond the means of the local authority, but a preservation trust was promptly formed under the chairmanship of Sir Arthur Elton to raise funds for its repair. Despite energetic fund-raising the resources of the Trust have been consistently outstripped by inflation; an estimate of £75,000 for repair in 1971 has now increased tenfold, and Clevedon Pier remains broken and unusable. On July 10 Woodspring District Council voted overwhelmingly to pull it down, rather than face the colossal repair bills that have mounted up over the past 9 years. For the local authority has deplorably neglected the regular upkeep of the piers surviving spans during the nine-years wrangle over its repair, having rejected a plan put forward by the Trust soon after the collapse to mothball the pier, at an estimated cost of £20,000, until funds for restoration could be gathered.

Times are not propitious for spending large sums of public money on restoring Victorian piers. But another coach and horses will be seen to have driven through the listed building legislation if Woodspring's proposal to demolish this unique monument is allowed to proceed.

Demolition by neglect will have prevailed again, and who can take to task those developers who profit by this existing loophole in the procedure, while local authorities, hard-pressed financially though they may be, set an example of such contempt for the listed buildings in their care.

Sir Arthur Elton, a lifelong champion of the role of industrial monuments and a regular attender at our early ia conferences, concluded his appeal for Clevedon Pier with these words 'for over a hundred years, Clevedon Pier has added humane grandeur to our environment. It is part of the heritage of the most civilised nation on earth. Let us not love it and its kind too little and too late. Let us not take for granted the marvels of engineering and industry which have been the admiration of the world'. If we seriously support the reasons for which this Association was set up, then it is not enough for us to stand mutely aside while this perverse plan is implemented by Woodspring District Council. Too little and too late our love for the Euston Arch and the Sudbrook engines may have been. If we miss this chance at Clevedon, there will not be another.

National Piers Society Lady Elton writes: The inaugural meeting took place in London on July 11, less than a day after the disastrous decision of Woodspring District Council to demolish Clevedon's Pier. The press coverage was astonishing. The National Director, Capt. G O Symonds, was, he said, subsequently besieged for information, and it was clear that the National Piers Society is going to make an authoritative contribution to a hitherto neglected aspect of the preservation of technological monuments.

"We are now left with only fifty", said the Chairman, "but nearly all of them are trading well." He added that the Society is not out to preserve every particle of rusting iron work, but to demonstrate that "piers, pleasure, preservation, and profit are indivisible".

Most of the speakers had met last September at the University of Sussex, the proceedings of the symposium having been fully set out in **Portico,** The Journal of the Faculty of Architects and Surveyors (Winter, 1978). Technical reports were substantial, not least that of Peter Mason, BSc(Hons) London, CEng, FICE, FIMechE, PPIStructE, FIArb, MConsE.

Sir John Betjeman, President of the new Society, spoke very movingly of the importance of retaining those industrial monuments, especially pleasure piers, which have long been so locally evocative. 'Clevedon Pier for its beauty, Southend for its length, and Herne Bay for me' he said. 'Piers unite us all, and they also improve the sea'.

After lunch, Gavin Henderson gave a slide lecture, 'The Pleasures of Piers', compounded of learning and fantasy, but with a grave account of how piers sustained music and musicians. Mr Simon Adamson, author of ***Seaside Piers***, was also present.

Are Local Authorities to be Patrons or Vandals? It was a pertinent question haunting the future of Clevedon Pier.

Publicity Matters One of the proposals discussed at the AGM last year in Penzance was the appointment of an Honorary Publicity Officer, to make the Association's activities more widely known outside its own ranks and to act as a Press spokesman on industrial archaeological matters. Your Council has asked Julia Elton, who has experience of writing for the National Trust quarterly magazine, for ***Country Life*** and for other national journals, to assume this new post, and Douglas Hague has supplied the profile which follows:

A Profile Julia Elton is the eldest of the three children of the late Sir Arthur and Lady Margaret Ann Elton and she has inherited an amalgam of the quality and character of both parents, blended with much that is peculiar to herself. Being brought up in the medieval surroundings of Clevedon and victorian London has given her a love and understanding of country and town. From Badminton she went to Trinity College of Music, London, where she concentrated on the oboe; from there she continued her musical studies and that of modern Icelandic at Leeds University. (Her mother being of that race). It was whilst in Yorkshire that she developed her interests in architecture which was to mould her career; although this had already been nurtured, almost subliminally, by her father's gift of a Nash view of the interior of the Crystal Palace, given to her before she was a fortnight old, whilst on her nursery walls hung straw pictures of the Menai Bridges.

After leaving University and the death of her father she began a new and full catalogue of his famous collection illustrating the history of technology. This had started in 1920 when he bought Acworth's ***The Railways of England*** for tuppence at a jumble sale in Marlborough. The catalogue was done with the encouragement and guidance of Ben Weinreb, and in 1975 Julia was received into No. 93 Great Russell Street as one of his staff of distinguished scholars. Not unnaturally her interests and work has been in the field of technology and she is now preparing the first Weinreb catalogue on the subject. Fortunately she is of catholic tastes and this specialization has not diminished her zest for life or sense of humour, but uppermost is her love for the music of Bach, Handel, Telemann etc, whose works she plays with great skill and deep understanding, and it is natural that with this goes a love of baroque churches.

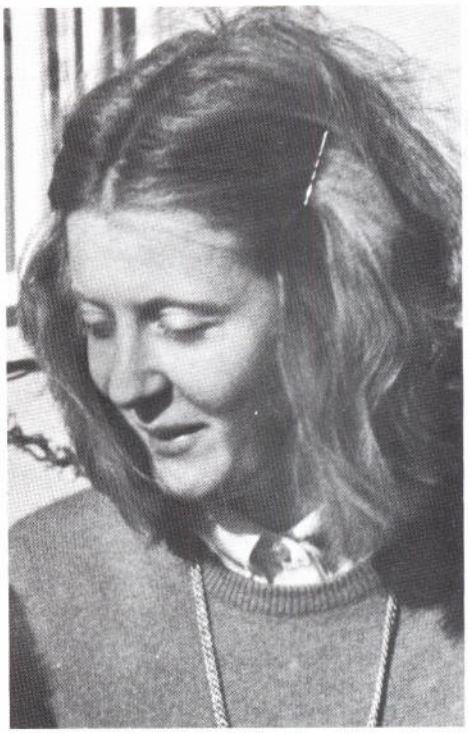
Julia will seek, accept and also reject advice from her many friends both old and young; she navigates her little black car with skill and great selfconfidence through the by-ways of central London. Those fortunate enough to have sampled her hospitality know her to be an excellent and imaginative cook.

During the last couple of years Julia has accummulated an almost unique knowledge of the major and minor works of both well-known and obscure civil engineers throughout the 18th and 19th centuries. If she does not burn herself out prematurely (which is very unlikely) Julia should be a very bright star in the 'industrial' firmament well into the next century.

Douglas Hague

Picture by North Somerset Mercury

Clevedon Pier in it's heyday



Survey and Excavation of Welsh Potosi In 1978, students taking Leicester University's three-year Adult Certificate Course in Industrial Archaeology began a survey and excavation of the lead and copper mining sites of Esgair Hir and Esgair Fraith near the Nant-y-Moch Reservoir in Dyfed.

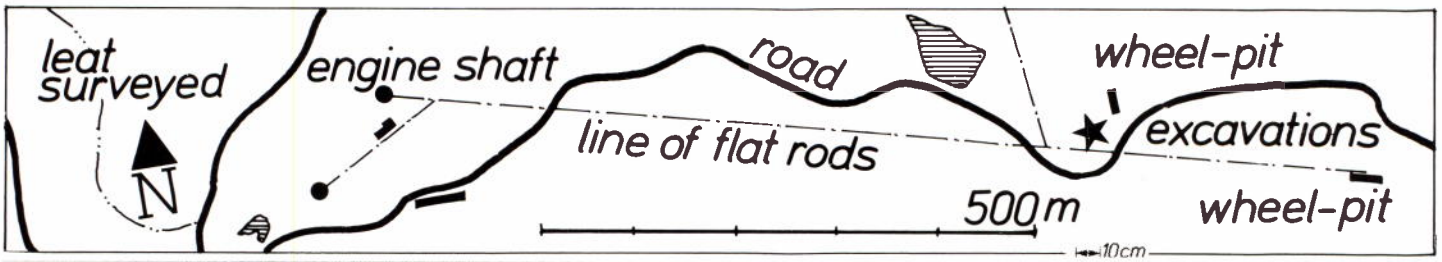
Mining in the area dates from the 1690s when its potential was compared by William Waller to that of the Bolivian silver mines of Potosi and it was under this name that George Borrow visited it in 1854. The archaeological value of the site was suggested to the tutors by the late David Morgan Rees, Keeper of the Department of Industry at the National Museum of Wales, whose obituary appeared in the AIA bulletin last year. In his memory and convinced of the potential of the site, the class and its tutors undertook further work in July 1979, joined by several members of BIAS. The following is an interim report since all participants agreed that further work would be both essential and fascinating and we hope that others will join us for a week in July next year.

of numerous dolly stands has confirmed that there were two lines of rods pumping two shafts. There is a further 9m pumping and drawing wheel, the physical remains of a 12m crusher wheel and documentary evidence for several more wheels powering dressing machinery. This obviously made heavy demands on local water reserves and an extensive leat system was built to bring water from reservoirs, including the artificial Llyn Dwfn and Llyn Conach, up to 5 km away. One of these leats was surveyed by levelling to establish its longitudinal section and much more work needs to be done to determine the engineering problems of leat construction on such a vast scale.

Limited excavation in 1978 confirmed the existence of a Cornish frame for concentrating slimes, a fact which could only be determined archaeologically since a map dating from the 1850s in the National Library of Wales marks numbers of circular structures but does not differentiate between them.

The surviving slime pits were sectioned and two horse whim circles excavated, in one of large covered launder 0.29m x 0.20m running west-east behind the ore slides revealed a series of inter-connecting rectangular wooden boxes, about 2m x 1m and 30-40cm deep. These were cross-boarded with a slight inclination lengthways and contained slimes in excellent stratification. They could not be entirely excavated because of the Forestry Commission road but were probably either flat buddles or catch pits. Adjacent to these was a circular convex buddle 6.16m diameter and 0.75m deep, with a well-preserved concrete kerb 0.45m wide. A whole series of overlapping launders, some of which had clearly gone out of use by the time others were built, indicated firstly a number of different periods of working and secondly the need to carry both water and particles of ore in suspension from one part of the dressing floor to another; two or three grades of material might leave one machine in different directions.

The site is remarkable in the number of wooden structures which survive. They have been protected by 1-2m of debris and slimes,



The capstan pit by 'engine shaft' at Esgair Hir.

Before and after clearance.

The mining sett is a long narrow one beginning in the valley to the west of what Waller called 'Bwlch-yr-eskir-hir' and extending eastwards over the pass down the valley of the Afon Lluestygofa for about one mile. Waller's working was concentrated at the western end and successive companies have worked steadily eastwards. The main surface features of the site date from a period of extensive development first by the Flintshire smelting company of Williams and Eyton beginning in 1839 and then by a series of heavily capitalised companies until about 1909. The site has now been partially planted over by the Forestry Commission which, together with inevitable decay of structures, made the recording of features an urgent matter.

In 1978 the waterwheel pits and balance bob pits were cleared as far as possible and measured. One of these, constructed in 1839, originally contained a 12m wheel pumping a shaft almost 1 km away by means of flat rods. This is marked on the first edition of the 6" OS map but careful examination of the stumps which the capstan pivoted in a stone slab with a small roller 2.43 m distant from its centre over which the rope ran to the shaft. Surface clearance on one of the dressing floors revealed two inclined troughs 1.8m long and 0.235m wide with low sides 10cm high, sloping outwards. A covered conduit or launder ran behind these two, ending opposite them but 8cm below. Clearly the structures were above original ground level and the 1979 excavation commenced with the clearance of the 'A' frames supporting the higher ends of the troughs which were 0.54m in depth. The lower ends appeared to be slotted into a stone wall 0.58m wide and 1.27m high. West of both troughs and set against the stone wall was a boarded structure containing the remains of very rusted sieves, fed and drained by a series of conduits. Documentary evidence shows that the jiggers used on the site in the mid-C19th were considered to be of an advanced type, and it is probable that the structures excavated were part of these set against the southern wall of the jigger house.

Investigation to determine the outlet of a and have now been back-filled to ensure their preservation. Next year, we hope to continue excavation in the area between this year's work and the tramway and ore bins to the north, in the hope of determining the sequence of processes. Much is known about nineteenth century ore dressing in theory but little has been done to establish how the theory was carried out in practice, and what changes were made because of local site and mineral conditions. Welsh Potosi is interesting historically as well as archaeologically and work is proceeding on documentary and map evidence. The one piece of equipment we need is a small pump to drain part of the excavation area. If you know where we could borrow such equipment, or would like a fascinating week practising industrial archaeology next July, please do let us know!

Marilyn and David Palmer
c/o Department of Adult Education
University of Leicester

Great Expectations London's **Royal Agricultural Hall** which was the venue for many gala events, circuses and trade shows in the years following its opening in 1862. Under the 150 ft span wrought iron roof many important agricultural inventions were exhibited for the first time at the Victorian equivalents of the annual Smithfield Show. Steam ploughing engine-builders for instance, would have always unveiled their new models at this once-prestigious venue, tucked away behind The Angel at Islington. Latter years, however, have seen the decline of the building, and since its purchase by the London Borough of Islington nearly three years ago, as reported in Bulletin 4.6, its new owners have been busily canvassing suggestions for its use, but the poor state of the roof will have deterred many would-be occupants. A promising proposal comes from a consortium headed by Romm Doulton, an American-based organisation, and Whitbreads who propose to share the £5 million cost of putting the building in good order and using it to house a 'Dickens Disneyland', the total cost of which is estimated at £12 million.

The proximity of Camden Passage antiques market has no doubt encouraged the promoters to bring more tourists to this presently unglamorous part of North London, although local officials are concerned to provide adequate parking and access facilities in time for the proposed opening in late 1982. The rent payable by the new tenants is expected to be between £5,000 and £10,000 per year.

Nuclear Insight or IA up to date Visitors to the northernmost part of Scotland will be able to include in their holiday a visit to the Dounreay Nuclear Establishment until 30 September this year. Except when operational restrictions preclude it, the Prototype Fast Reactor will be included in the official tours which take place every weekday afternoon. The PFR first produced electricity in February 1975 and reached its full output of 600 megawatts in February 1977. It is a development of the experimental Dounreay Fast Reactor of 14 megawatts which closed down in March 1977 after 18 years' operation and evaluation of the fast reactor principle, and the spherical containment building of the DFR is being progressively decommissioned with a view to converting it eventually to a fast reactor museum. Visitors to Dounreay are welcome to visit a small exhibition illustrating the work done there, open each day from 0900-1600. Admission to the afternoon tours is by ticket, available without charge from the Tourist Information Centre in Thurso. Parties are limited in size to ten or twelve, and children under 14 years cannot be accepted. Over 15,000 visitors have visited Dounreay annually in recent years.

Award for Dorothea Well-known for their successful restoration of many industrial monuments such as the heavy lift steam crane at Wapping Wharf, Bristol, the vertical winding engine at Bestwood Colliery, Notts; the recommissioning of a number of disused water-mills and the restoration of Warrington Town Hall's superb gates and balustrades, Dorothea Restoration Engineers Ltd last year received an award as runner-up in a competition organised by the Council for Small Industries in Rural Areas jointly with the Sunday Times.

The competition recognised applicants' ability to provide new jobs in rural areas of England, as well as helping to provide new attractions for visitors at a number of remotely-situated industrial sites. Dorothea have established a restoration workshop at Grove Mill, Lumbhole, a listed textile mill with an 1835 beam engine and 25 foot waterwheel at Kettleshulme in north Cheshire.

The firm had its origins in an informal partnership between four of the present six directors, during their undergraduate days. Resolving to make industrial preservation their career, they established themselves as a limited company in 1974 with themselves as the only employees. By 1977 the number of staff had risen to 14 and to 19 the following year. The enthusiasm and versatility of the staff has been backed up by help from CoSIRA with management accountancy, marketing and production engineering.

One of the first causes espoused by the group was that of the Hodbarrow hematite iron mines, near Millom in Cumbria, whose unique combination of dramatic site and historic machinery was threatened with destruction. Two Cornish engines, the last built by Williams Perran Foundry and Harveys of Hayle in 1878 and 1899 respectively, were the centrepieces of the site. General interest in IA still being at a low level at that time, both engines were eventually scrapped, but the Hodbarrow Preservation Group, as the group were then known, did succeed in saving a locomotive, rolling stock and some smaller items.

In 1969, they played an important part in securing the preservation of the rotative beam pumping engines at Ryhope, near Sunderland and the extension of their activities into this and the preservation of two steam shovels (one now at Beamish and the other at Leicester Museum of Technology) was reflected in a change of name to Industrial Steam Preservation Group. Having been thwarted at Hodbarrow, they turned their attention to Dorothea Slate Quarry in North Wales, where a 68" Cornish engine built by Holman Bros in 1904 had lain idle since 1956. Against the odds, this engine has survived and there are hopes that it will be taken into DoE guardianship and ultimately restored to working order. It is as Dorothea Restoration Engineers Ltd that the group are still known.

Dave Hodgson of Dorothea Restoration Engineers Limited receives the Small Business Award from Lord Northfield,

As well as their workshops at Kettleshulme, the firm has a base in Derbyshire where they may be contacted at Westons Forge, South Street, Buxton - telephone 0298-3438 and a branch in Bristol - telephone 0272-697815. Involved as they are with a wide range of restoration projects throughout the country, D R E Ltd can claim an enviable 'overview'.

From Gunnislake in Cornwall comes an offer of facilities to repair steam boilers and pressure vessels. R K Pridham of Holly Bank, Chilsworthy Beam, Gunnislake can manufacture

flanged fireboxes of rivetted or welded construction as well as other boiler components. Large diameter drilling, welding and rivetting are also offered, with facilities for pressings of up to 300 tons. Quotes are free of charge and all work is to British Standard specification. Enquiries to Mr Pridham at Tavistock 5276 (daytime) or Gunnislake 832945 (after 7pm).

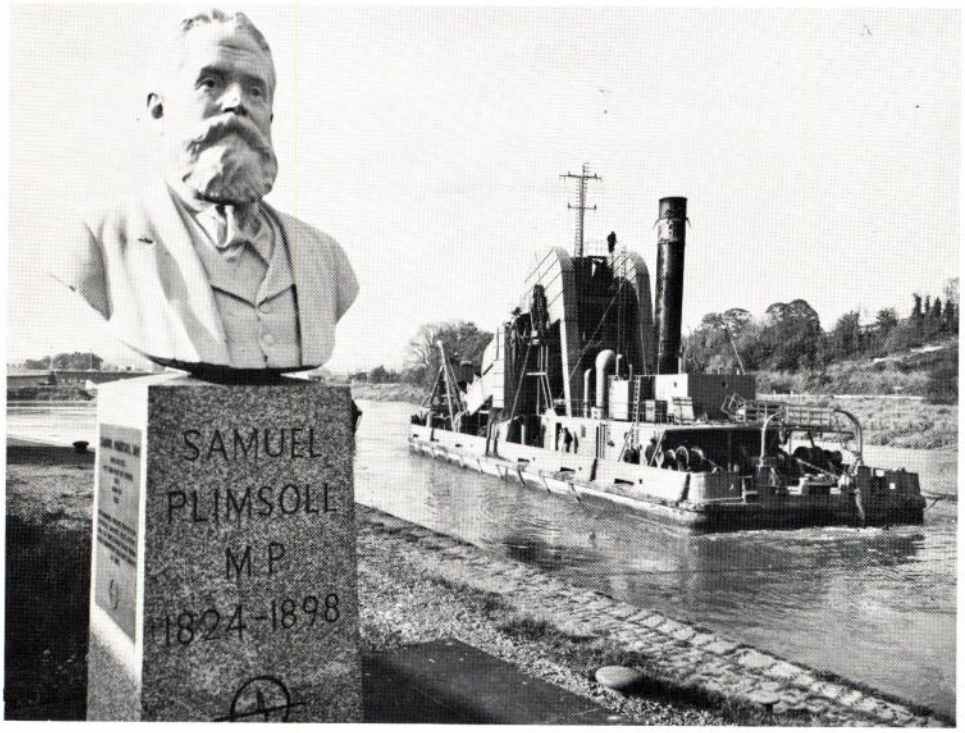
Samuel Plimsoll Soldiers on. A familiar feature of the Port of Bristol will be seen no more when the steam dumb bucket dredger ***Samuel Plimsoll*** leaves to take up work at Palermo in Sicil Built by Charles Hill's at their Albion Dockyard in 1955, the vessel was the largest dredger ever built in Bristol, being 42 m long x 11 m beam. A triple expansion steam engine of 500 ihp was fitted, fed from a 3-furnace Scotch boiler, coal-fired to take advantage of Bristol's convenient proximity to the Welsh coalfield. Oil firing was substituted in 1968, and the easy steaming provides ample power to operate the chain of 36 buckets each of 25 cu ft capacity, the dredger not being fitted for self-propulsion.

postgraduate course at Leicester will offer a small number of students the opportunity of obtaining a Graduate Certificate in Post-Excavation Studies. The course is being run in close cooperation with the Ancient Monuments Inspectorate of the Department of the Environment, who are making a major contribution towards the cost, and who will also be supplying much of the material on which the students will work. The students will therefore be making a postive contribution towards reducing the Inspectorate's back-log of unpublished excavations while at the same time working for a worthwhile qualification. It is hoped that all aspects of post-excavation work, from the initial sorting of finds to the actual processes of printing and publication, will be covered. In this respect the University is fortunately placed to take advantage of the assistance provided by other departments ranging from Computor Services to the University Press. The course will undoubtedly be of great value to all students who intend to take up an archaeological career.

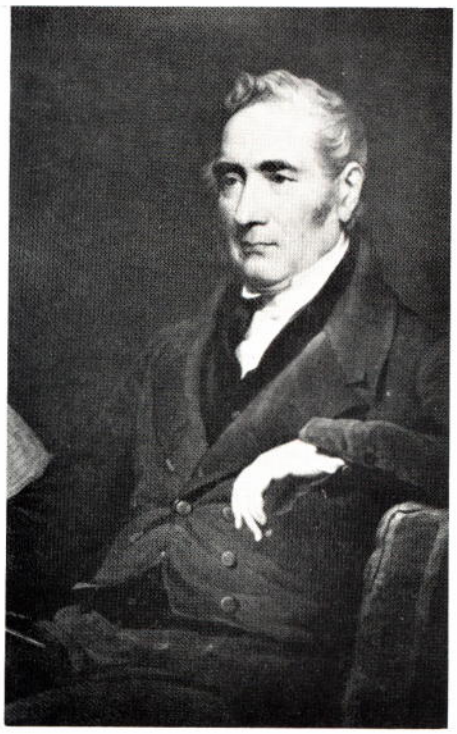
had trade and religious connections with one of the notably famous inventors in the eighteenth century iron trade, Abraham Darby I, the pioneer of coke-smelting. As such, it has a very special place in our history.

The site, which is by the River Leven roughly 1.6 km west of Newby Bridge, was in continuous use for iron-smelting from 1711 to about 1968 – and the furnace used charcoal until 1920, the pig-iron thus produced being highly prized for the making of quarrymen's crowbars. After 1920, the furnace stack was extended and partly rebuilt, and more up to date equipment was installed on the site; but part of the eighteenth century masonry still remains, and storage buildings for iron ore and charcoal (from that age) are still to be seen in the immediate vicinity.

Backbarrow stands in a complex of historic buildings. Bare Syke, a family home of John Wilkinson the eighteenth century ironmaster, stands 200 yards to the south; a famous former cotton mill is a short way up-river; and the workers' terrace rows belonging to the mill



picture by Colin Momber



On 6th October 1829, Robert Stephenson's Rocket began its successful series of Rainhill trials

Drive from the main engine is through a flat belt running on plain pulleys, an arrangement which has saved the engine from sudden shocks when one of the buckets meets an immovable obstruction on the dock bottom. When the Port of Bristol Authority offered her for sale last year, scrapping was thought to be the ***Samuel Plimsoll's*** most likely fate, but her new owners in Sicily are known for their policy of buying elderly vessels and running them with the minimum of maintenance 'until they drop', and bought 4 vessels from UK ports on their latest shopping expedition. Her generous beam affords great stability as well as spacious working conditions below deck and her new owners, who bid £35,000 for the dredger compared with her cost when built of £150,000 can pride themselves on having acquired an excellent specimen of Bristol ship building, good for several more years of work however archaic her means of power may seem to us twenty five years on.

A New Postgraduate Course at Leicester University As from October a new one-year,

In connection with the **150th anniversary of the Liverpool and Manchester Railway** in 1980, the **Edge Hill Railway Trust** plans to open a Visitor Centre and Rail Trail on the site of the L & M's original Liverpool Terminus. Local volunteers have recently excavated the remains of the rope haulage installation designed by George and Robert Stephenson and these, together with surviving traces of the stables, boiler houses and engine rooms will be explained in the Visitor Centre to be established at Edge Hill. The project has the support of British Rail as well as the backing of the city and county councils and private industry. The Friends of the Merseyside Museums have contributed towards the cost of setting up the Trust and have nominated two of their committee members to serve as directors of the Trust.

The Clearance of the Backbarrow Furnace Site (1711) Backbarrow Furnace was one of the earliest blast furnaces to be established in the north of England. Using charcoal fuel, it was operated by a partially Quaker partnership who

(c.1801) are across the valley at Brow Edge.

The owner of the Backbarrow site, Mr D A While, has been engaged in discussion with the Lake District Special Planning and Tourist Boards, and with the D of E, about its future. He has agreed to a preliminary site clearance by volunteer labour, a detailed survey of the site, and the documentation connected therewith, already having been made by the Cumbria Planning Department and the Lake District National Park authorities.

The clearance calls for a great deal more than 'brute force and ignorance'. It requires a disciplined work force operating under the direction of qualified engineers. There is a great deal of dangerously poised metalwork and masonry. Workers on the site will need to be insured as well as properly dressed and directed, and to wear protective helmets. There is about 70 tons of girder-work, bars and former

moulding and casting appliances to be tided away; there is much loose brickwork near the furnace itself; and there are shrubs growing out of the furnace and other masonry. We need also:

Crowbars	Scaffolding
Shear-legs	Ladders
Blocks and tackle	Ropes and posts
Shovels	Wheelbarrows
Wedges	Sledgehammers
Steelcapped boots	Helmets

Whilst some of these items will obviously have to be supplied by public bodies, it would be more convenient if volunteers could (in the early stages) bring certain items with them, and arrange for transport of those items, until we have a safe lock-up building on the site. An experienced engineer has been approached, but there is plenty of scope for other similarly qualified to lead specific teams of three or four clearance workers. It is hoped to have such teams at work on weekend days later this summer; if you could contribute a pair of hands, or a small team, will you get in touch with Dr J D Marshall, Centre for N W Regional Studies, Bowland College, University of Lancaster?

Re-Using Historic Buildings Under the chairmanship of Lord Montagu of Beaulieu, a Working Party is investigating ways in which historic buildings may be given new uses, and seeks views and suggestions from any individual or organisation that would like to comment. The Working Party has been set up jointly by the Historic Buildings Council for England, the Historic Houses Association and the British Tourist Authority. AIA members will know of several industrial buildings in Britain, previously neglected and abandoned, which have been saved by imaginative re-use from almost certain demolition. Examples include Perth waterworks, now a Visitor Centre, the engine house of the Cotehele Consols copper mine in Cornwall, now a holiday house, and the 18th century brewery at Freshford in Somerset, now the seat of an architectural practice. The Working Party would be interested to have evidence of other such projects, failures as well as successes, and of suggestions for improvements to the legislation governing such conversions. The secretary of the Working Party, Douglas Webb, can be contacted at the British Tourist Authority, Queen's House, 64 St Jame's Street, London, SW1A 1NF.

Town Trails have become a popular means of identifying the architectural and historical features of our landscape without the need to have a guided tour. They are usually produced in a pocket sized format with production costs low enough to put them within the budget of even the most cost conscious local authority library, planning department or tourist office. Amongst those recently published are **Listed Building Walks** (5p each from the Bromley and District Consumers Group, titles from Philip Daniell, Countryside Officer, 300 Baring Road, London SE12), **Interest Trails,** including the Bridgewater and Manchester Ship canals, and available free from local libraries in Salford. These are produced by the Salford City Archivist and Cultural Services Department and information can be obtained by writing to the Central Library, Chorley Road, Swinton, Manchester M27 2AF. **Find Out About the Past,** childrens questionnaire booklets and **Local History Trails** are both published by the Arkwright Society (write to Christopher Charlton, Tawney House, Matlock, Derbyshire) and there are three of the first and seemingly dozens of the latter, including some for the use of motorists. **Blaenafon Town Walk** is a twelve page booklet, A5 size published by the Torfaen Museum Trust and available from the Torfaen Museum, Blaenafon, Gwent. **High Peak Trail** deals with a walk along the Cromford and High Peak Railway and is published by the Derbyshire County Planning Department in conjunction with the Peak Park Planning Board. **Industrial Archaeology in Powys** produced by the Powys County Council Planning Information Service, Llandrindod Wells, Powys are a series of leaflets describing some of the better known industrial archaeological features of the County such as the working water mill at Bacheldre and the Hay Tramway at Hay-on-Wye. **Aberystwyth Town Trail** has been produced, and published, by AIA Council Member, Douglas Hague at 30p. from Edlerton House, Queen's Road, Aberystwyth. It contains an extremely interesting and architecturally stimulating walkabout and several of Douglas's own photographs.

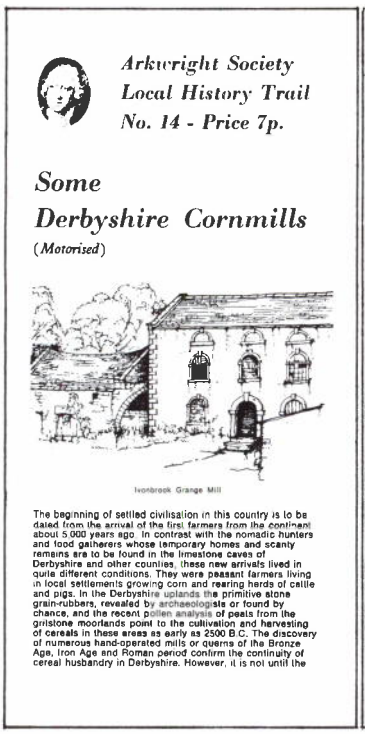
A series of local history trails with a considerable industrial archaeological emphasis have been published by the **Saddleworth Historical Society** at 20p each. There are at least six titles and they can be obtained by post (with 12p postage extra) from Mr B Barnes, 7 Elstead Road, Greenfield, Oldham OL3 7LL or from Saddleworth Museum.

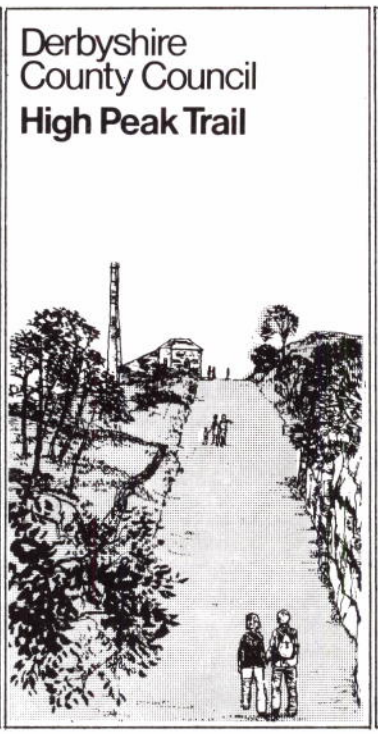
The Greater London Industrial Archaeolgocial Society (GLIAS) is in the process of extending its range of **IA Walks in London** and a note to Brenda Innes, 9a Upper Park Road, Bromley BR1 3NH, enclosing a SAE will bring full details of the series.

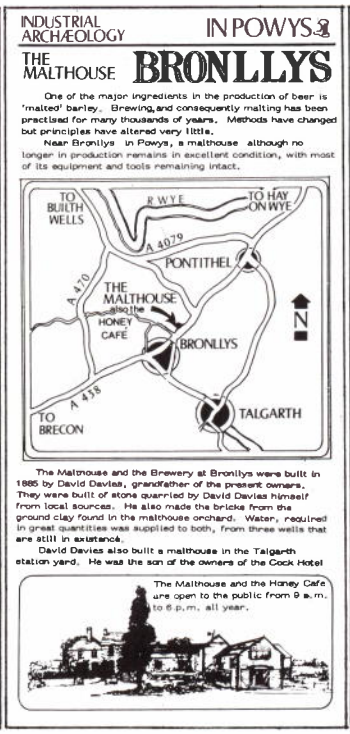
Finally the Bristol Industrial Archaeological Society (BIAS) have published four **Walkabouts** identifying the industrial archaeology and maritime history of areas close to the City Docks and Merchant district. They are 10p each and can be obtained from Ken Andrews, 35 Kellaway Avenue, Westbury Park, Bristol BS6 7XE.

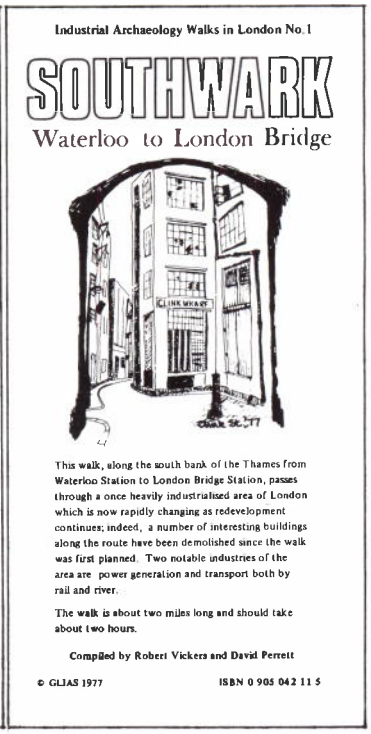
BIAS Walkabouts, a practical project. In April 1977 the Bristol Industrial Archaeological Society was ten years old and took a hard look at what the first decade had achieved. Recruiting and retaining members had obviously been successful (approximately 400 and 85% continuity)there had been a BIAS Journal every spring and BIAS Bulletin had appeared three times each year. But in one respect the Committee felt they had failed, the promotion and encouragement of an interest in IA for the ordinary 'man-in-the-street'.

So it was decided to instigate a series of IA walks in central Bristol, to publish leaflets giving literally a yard by yard journey round the main dockland and business districts and to make these available to visitors to the city and









of course Bristolians. Several members of the committee started investigating round trips of about 1½ miles (not as easy as it first appeared with the City Docks right in the centre of the best IA area and very few bridges) and a corporate style of leaflet and route map was evolved. By mid-June three **Walkabouts** had been surveyed, written-up, set in type and printed, and six public walks announced. From the first evening (there were two walks arranged for each route, all on evenings in June and July) we were embarrassed by the public response. Details had been made available through the Avon County Library Services in the city and Radio Bristol gave enthusiastic support and up to ninety people turned up for **every** walk. Our **Walkabout** leaflets sold in very satisfying numbers, many of our supporters buying a complete set and coming back a week later for another one.

When we started the scheme the committee agreed that as it seemed a reasonable way of taking IA to the ordinary Bristolian, we would order two thousand of each leaflet and if they remained unsold well we would have tried, and apparently failed, to interest non-committed people.

Now three summers later there are four central Bristol **Walkabouts,** we have acted as hosts to over a thousand people, most of whom appeared to be fascinated by the paraphenalia of cranes, bridges, wharves and warehouses which is maritime Bristol and quite a few of these have since joined BIAS. In a purely practical vein, our original outlay on the four leaflets was about £150. Our sales (and we give normal trade discount where appropriate) have brought us in about £350 so, we really **have** succeeded in business without even trying. We have generated a great deal of genuine interest and goodwill towards industrial monuments, and the most satisfying thing is that we have taken IA, quite literally, into the streets of Bristol. And it has worked.

The Chatterley Whitfield Mining Museum

The Chatterley Whitfield Colliery near Tunstall, Stoke on Trent, was the first in Britain to win 1 million tons of coal per year. This it did in 1900, when its four and a half thousand miners were completely dependant upon pick and shovel and had little idea how the introduction of mechanised coal cutting would transform the industry.

The Chatterley Whitfield Mining Museum Trust was established in 1977 with the objective of developing the colliery site as a Museum, once the mining operations ceased. On the surface, the Trust is responsible for 18.8 acres, but it is the underground workings and shafts, which have also been retained, that give the Museum its unique opportunity – to interpret the subject in its most natural environment, a three foot thick seam of coal, 700 feet below ground.

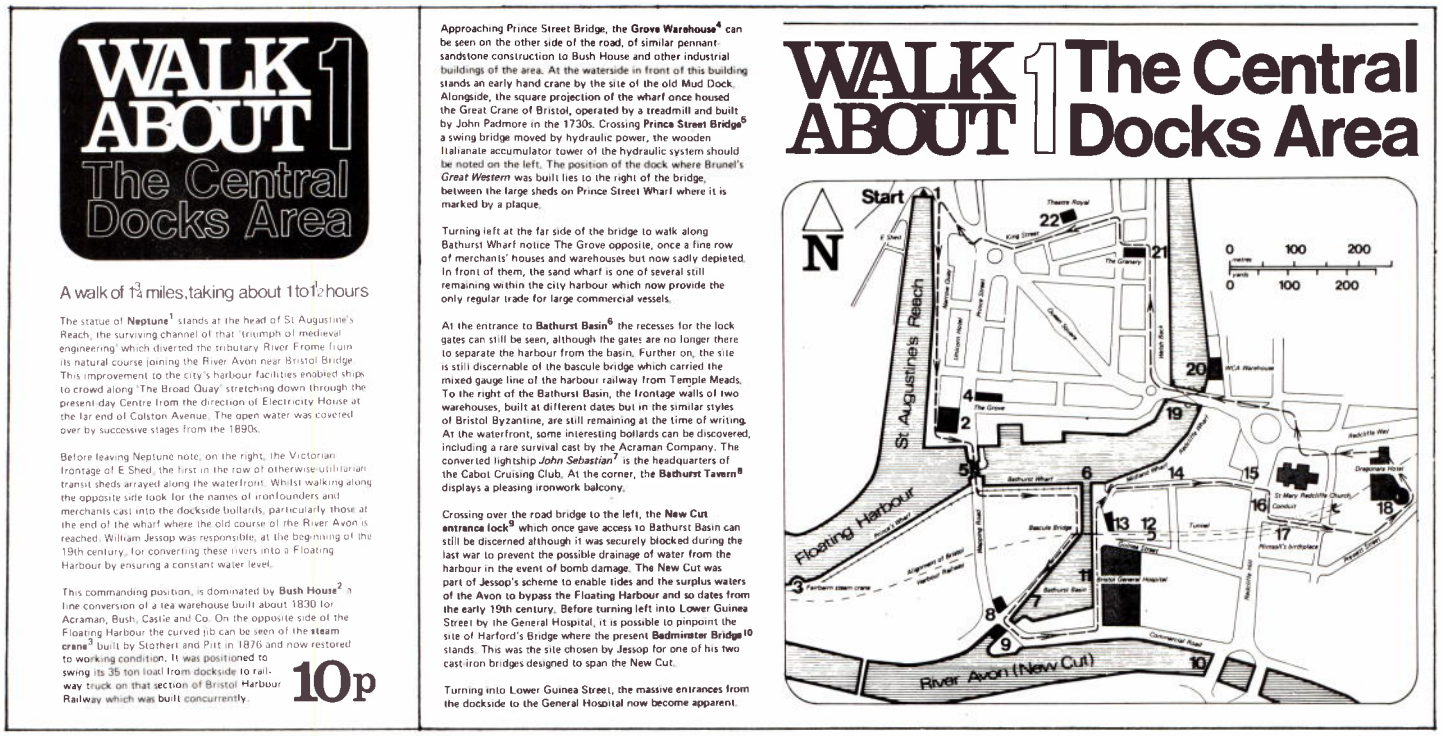
This section of the Museum, a tour of which takes between 60 and 90 minutes, is already open to the public, but a development plan for the surface Industrial Archaeology has been formulated and work commenced on the Winstanley brick built winding gear and heapstead dated 1913, and the colliery lamp-room which still serves its original purpose besides functioning as a reception and waiting area for the visitor.

The next phase of the project will be to restore the Hesketh steam winding engine built by Worsley Mesnes of Wigan in 1914. Adjacent to this is the Hesketh Power House which provided both electricity and compressed air for the whole colliery. Ancillary machinery of this nature is already being earmarked for future preservation and display.

Other features on the site include pump-houses, heapstead, boiler house, railway cutting and the dirt conveyor which carried colliery waste to the tip. This itself is the subject of the City of Stoke on Trent's latest land reclamation scheme. The City and the Museum Trust view the two projects as mutually complementary, both recovering a large area of derelict land and establishing a permanent record of industrial development in the North Staffordshire Coalfield.

Note: The Museum is open Tuesday – Friday 0930–1630 (closed Monday), Weekends and Bank Holidays (including Mondays) 1000–1700. Last Tour underground starts 1530 approximately. Admission costs £1.25 for adults, £0.65 for those under 18 and senior citizens. Wear warm clothes and stout shoes. Children under 12 cannot be permitted underground. The Museum will close for the winter on Saturday 28 October.

New Forum for Archaeologists Archaeology in North America is finding itself increasingly fragmented into specialist sub-disciplines, each of which tends to promote its own separate activities and produce its own publications. In an area offering as many diversities of archaeological context as does the North American continent some grouping of special interests is inevitable if the subject is not to remain impossibly wide in its scope. But conscious of the danger that the various groups, each meeting separately and producing their own specialist publications, may end up not talking to each other at all, Robert Schuyler, an Assistant Professor of Anthropology at the City University of New York has launched a new journal **'The North American Archaeologist'** which he hopes will serve as a scholarly but catholic forum for all archaeological disciplines relevant to North American history. Specialist advisor on industrial archaeology is Robert Vogel, Curator of Mechanical and Civil Engineering at the National Museum of History and Technology in Washington DC and newsletter editor for our sister organisation in North America, the SIA, whose lively, topical and well-informed publication is the envy of several other national IA societies. Robert also serves on the Editorial Board of **'Industrial Archaeology Review'** and his involvement with the setting up of the International Committee for the Conservation of the Industrial Heritage, launched in Sweden in 1978 and now organising itself for a major conference elsewhere in Europe in 1981, has given him an enviable overview of industrial archaeology in the North Atlantic region. The success of the new journal in maintaining links between archaeology's



WALK ABOUT 1
The Central Docks Area

A walk of 1¾ miles, taking about 1 to 1½ hours

The statue of **Neptune**[1] stands at the head of St Augustine's Reach, the surviving channel of that 'triumph of medieval engineering' which diverted the tributary River Frome from its natural course joining the River Avon near Bristol Bridge. This improvement to the city's harbour facilities enabled ships to crowd along 'The Broad Quay' stretching down through the present day Centre from the direction of Electricity House at the far end of Colston Avenue. The open water was coveted over by successive stages from the 1890s.

Before leaving Neptune note, on the right, the Victorian frontage of E Shed, the first in the row of otherwise utilitarian transit sheds arrayed along the waterfront. Whilst walking along the opposite side look for the names of ironfounders and merchants cast into the dockside bollards, particularly those at the end of the wharf where the old course of the River Avon is reached. William Jessop was responsible, at the beginning of the 19th century, for converting these rivers into a Floating Harbour by ensuring a constant water level.

This commanding position, is dominated by **Bush House**[2] a fine conversion of a tea warehouse built about 1830 for Acraman, Bush, Castle and Co. On the opposite side of the Floating Harbour the curved jib can be seen of the **steam crane**[3] built by Stothert and Pitt in 1876 and now restored to working condition. It was positioned to swing its 35 ton load from dockside to railway truck on that section of Bristol Harbour Railway which was built concurrently.

10p

Approaching Prince Street Bridge, the **Grove Warehouse**[4] can be seen on the other side of the road, of similar pennant-sandstone construction to Bush House and other industrial buildings of the area. At the waterside in front of this building stands an early hand crane by the site of the old Mud Dock. Alongside, the square projection of the wharf once housed the Great Crane of Bristol, operated by a treadmill and built by John Padmore in the 1730s. Crossing **Prince Street Bridge**[5] a swing bridge moved by hydraulic power, the wooden Italianate accumulator tower of the hydraulic system should be noted on the left. The position of the dock where Brunel's *Great Western* was built lies to the right of the bridge, between the large sheds on Prince Street Wharf where it is marked by a plaque.

Turning left at the far side of the bridge to walk along Bathurst Wharf notice The Grove opposite, once a fine row of merchants' houses and warehouses but now sadly depleted. In front of them, the sand wharf is one of several still remaining within the city harbour which now provide the only regular trade for large commercial vessels.

At the entrance to **Bathurst Basin**[6] the recesses for the lock gates can still be seen, although the gates are no longer there to separate the harbour from the basin. Further on, the site is still discernable of the bascule bridge which carried the mixed gauge line of the harbour railway from Temple Meads. To the right of the Bathurst Basin, the frontage walls of two warehouses, built at different dates but in the similar styles of Bristol Byzantine, are still remaining at the time of writing. At the waterfront, some interesting bollards can be discovered, including a rare survival cast by the Acraman Company. The converted lightship *John Sebastian*[7] is the headquarters of the Cabot Cruising Club. At the corner, the **Bathurst Tavern**[8] displays a pleasing ironwork balcony.

Crossing over the road bridge to the left, the **New Cut entrance lock**[9] which once gave access to Bathurst Basin can still be discerned although it was securely blocked during the last war to prevent the possible drainage of water from the harbour in the event of bomb damage. The New Cut was part of Jessop's scheme to enable tides and the surplus waters of the Avon to bypass the Floating Harbour and so dates from the early 19th century. Before turning left into Lower Guinea Street by the General Hospital, it is possible to pinpoint the site of Harford's Bridge where the present **Bedminster Bridge**[10] stands. This was the site chosen by Jessop for one of his two cast-iron bridges designed to span the New Cut.

Turning into Lower Guinea Street, the massive entrances from the dockside to the General Hospital now become apparent.

WALK ABOUT 1 The Central Docks Area

burgeoning family of sub-disciplines will be watched with interest. We need to keep the clay-pipe specialists in contact with the marine arcaheologists and Tudor timber experts on speaking terms with the hamburger-stand buffs if each is to help the others.

Adaptive Re-Use. Pocklington Railway Station, Humberside which is a Listed Building has been derelict for some time. Recently it has been converted into a Sports Hall with a £50,000 grant from the Sports Council. The arena occupies the former platform and tracks area while the waiting rooms provide changing rooms and the booking hall now has seats for spectators. Further details of this scheme and other preservation schemes for railway buildings can be found in 'Off the Rails, Saving Railway Architecture', £1.10 post paid from SAVE Britain's Heritage, 3 Park Square West, London NW1 4LJ.

At the Weald and Downland Open Air Museum at Singleton, Sussex, work is well advanced on the re-erection of the water-mill removed from Lurgashall on the Petworth Estate. It is hoped to grind corn for re-sale, and the Museum would particularly like to find an example of a Silver Creek Smut and Separating Machine, examples of which were made in large numbers between 1870 and 1920 by the Silver Creek Company of New York State and exported to Europe and elsewhere. If you know of a surviving example, please write to Robert Demaus at St Michael's, Tenbury Wells, Worcestershire who would be glad to hear from you.

Salford Museum of Mining During the summer of 1979 the new Salford Museum of Mining at Buile Hill Park, Eccleshall Road, Salford opened to the public with a new coalmining gallery. A guide to this museum and to the Buile Hill No. 1 Pit has been produced by Geoff Preece BA AMA Keeper of Industrial Archaeology at Salford and is obtainable from the museum at 50 pence plus postage.

The booklet is nicely produced and contains some interesting illustrations of mining in the Salford area.

Walsall Museum has published a booklet describing the history of lock making in Willenhall, an important centre of this specialised Black Country trade. The author is G Varndell and copies are available by post from the Museum and Art Gallery, Lichfield Street, Walsall WS1 1TR. From the same address is obtainable a leaflet describing the Museum's collection of locks and fastenings, with details of its location and hours of opening.

Corinium Museum David Viner, an active member of the AIA, and Curator of the Corinium Museum, Park Street, Cirencester, Gloucestershire, has extended his range of museum publications by including one on the Golden Age of Cotswold Wool, by Marian Woodman entitled **'Cotswolds to Calais'.** This interesting booklet, illustrated by Allison Howard-Drake is intended for children and students and the price is 75p.

A further publication produced by the Museum is a reproduction of a poster produced for the marriage festivities of the Prince of Wales in Cirencester in 1863. This sells at 40 pence and will make an amusing addition to anyone's study.

Somerset Rural Life Museum This museum centred on Abbey Farm, Chilkwell Street, Glastonbury produces a well-illustrated guide book to the museum showing some of the extensive range of agricultural and domestic items housed there. Also on sale is a booklet in the 'Victorian Somerset' series entitled **'John Hodges a farm labourer',** telling the life story of one farm labourer from the village of Butleigh during the reign of Queen Victoria. The same story could be told of the many thousands of labouring families in rural Somerset during that time; such information is often difficult to obtain and one must congratulate the authors, Ann Heeley and Martyn Brown, for their efforts in collecting original documents and archives together with other evidence to provide such a vivid picture of farming life.

The Great Britain needs you "As members may be aware, the interior of the historic ss 'Great Britain' was virtually gutted while she lay as a wreck in the Falkland Islands and the restoration of the interior will therefore require a number of contemporary, or reproduction, fixtures and fittings, including door furniture, hinges, wall-mounted candle lanterns, ships' gimballed lanterns, brass rim locks, brass tread strips for stairs, hemispherical wash bowls, etc.

Members able to offer suitable artefacts, contemporary drawings, or photographs are asked to write to:— The Project Director, ss Great Britain Project, Great Western Dock, Gas Ferry Road, Bristol BS1 6TY."

Several enquiries have been received recently about **how local IA societies might obtain corporate membership of the AIA** or might be affiliated to the Association in some way. There can in fact be no provision for any such form of membership, for since reorganisation in 1978 as the Association for Industrial Archaeology Limited, we are required to operate as a company limited by guarantee, with no form of membership other than personal; this is a general requirement under the Companies Act. Societies wishing to have a voice in the Association's affairs are of course at liberty, now as before company status was acquired, to nominate as many of their own members as they please to speak for them at any General Meeting of the Association. Each such member, although not enjoying any special delegate status, can use his or her personal vote to support the point of view of his or her local group or society. But there is no provision under company law whereby the AIA could operate as an 'association of associations'.

OBITUARY

Trevor Walden CBE MSc FMA FSA (Scot) who died on 10 March 1979 was a distinguished museum curator who rose to the top of his profession and retained an enthusiastic and lively interest in the history of technology, having been active in industrial archaeology before the term came in current usuage. He was born on 15 April 1915, son of Alfred Walden, a Peterborough engineer, and entered the museum profession immediately on leaving school. Having spend four years as a trainee in the natural history department at Leicester City Museum, Trevor moved to Halifax in 1938 as assistant keeper at the Bankfield Museum. In 1941 he joined the Royal Navy, and his wife took over his responsibilities at the museum. He served in many overseas theatres, particularly in the Mediteranean and the far East, with midget submarines and resumed his museum career at the end of hostilities, becoming Director of Museums in 1951. He and his wife Anne did much to build up the collections of textile machinery at Leicester and in the early 1970's he was proud to see the birth of the Museum of Technology for the East Midlands at the Abbey Mills Pumping Station, a concept which sadly was unable to maintain its intention of collecting and exhibiting material from throughout the East Midlands region and has since had to re-define its catchment area as that of Leicestershire only. He also acted as advisor during the early days of the open air museums at Beamish and Ironbridge before full-time staff were appointed, and was also involved with the establishment of the Tramways Museum at Crich.

In 1972 he took over as Director of Museums in Glasgow and his appreciation of the distinguished engineering tradition of that great city was reflected in the extentions to the Museum of Transport at the old tramcar works at Coplawhill over which he presided. He strove long and hard for the creation of a maritime museum for the Clyde, and although financial stringencies have so far thwarted the achievement of this goal, he succeeded in getting the veteran turbine screw steamer ***Queen Mary II*** transferred to the Museum for preservation. Just before his death he was actively campaigning for the preservation in Glasgow of the Clyde-built destroyer ***HMS Caprice,*** for his Naval experiences had equipped him to appreciate better than many the excellence of Clyde shipbuilding. From his home at Bowling, less than ½ mile from the Clyde he delighted in watching merchant vessels passing up and down the river, and the occasional warship proceeding to sea from one of the Clyde shipyards.

Museums were his delight, a passion which he shared with his wife Anne. He worked devotedly and tirelessly for them and expected his staff to do the same; such were his powers of leadership that he was rarely disappointed. He was particularly delighted when his elder son Ian, having embarked on a career in industry, moved into the museum field and after taking a post at Beamish, was appointed as first Director of the Black Country Museum.

He was patient, always approachable, fair and just and never pompous. He gave of his best and expected as much from his colleagues. While regretting that he was not permitted to enjoy any retirement beside the river he had grown to love, we can rejoice in the fact that at the time of his death he was active in the profession which he had made his whole life.

AIA Bulletin is published 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 Membership Secretary Association for Industrial Archaeology, The Wharfage, Ironbridge, Telford, Salop TF8 7AW England (095—245 3522).

ISSN 0309—0051.