

Whither the Albert Dock

In January the Public Inquiry which will decide the future of the Albert Dock opened in Liverpool amid intense local and considerable national interest. In essence Gerald Zisman, a London property developer, wants to turn Albert into a world trade centre and, in doing so, fill in the seven-acre dock basin within. The objectors, co-ordinated by the Merseyside Civic Society and including the AIA, consider Albert without water is unthinkable. Over the whole project the spectre of Merseyside's 17% unemployment hangs like a mushroom cloud. John Crompton, present during most of the proceedings, has written his impressions. Adrian Jarvis's invitation precedes it.

Re-develop the Albert Dock. (A new board game for all the family). The Albert Dock and its warehouses were designed by Jesse Hartley and opened in 1846. Philip Hardwicke designed the impressive Traffic Office alongside and made some stylistic additions to the warehouses. The warehouses and the traffic office are separately listed, both Grade 1, and have been the subject of development proposals for at least fifteen years.

So many plans have come and gone that it seems unfair to deny members their turn, and we are therefore having a competition to produce the "best" plan. The criteria of merit will include damage to listed structures, destruction of the ambience of the area, impracticability, uselessness and expectation of profit for outside parties. Entries exhibiting a high K factor will be heavily penalised. Entries should take the form of a general description of the scheme such as might be used for lobbying local politicians or for a press release, broadly along such lines as these:

Our proposal is to develop Albert and its immediate environs as a Trade Centre, which

will play a significant part in the economic regeneration of Merseyside. We intend to reinstate the warehouses to, so far as possible, their former glories, by glazing in the quayside, constructing links between the blocks and demolishing a few items which we are sure Hartley did not really want anyway, such as the loading yard walls. Of course it will also be necessary to provide service cores in these loading yards and to remove all the hydraulic jigger jibs.

One of the principal difficulties with the site is the large number of totally irrelevant minor buildings, such as the Piermaster's House, the Hydraulic Pumphouse, the cooperage etc., 37 items in all, and we feel that the sweeping away of all this decaying clutter to provide car parking space will greatly enhance the appearance of the whole area. Also, we are intending to remove a totally inadequate and obsolete swing bridge, built as long ago as 1846 to a different site and replace it with an elegant modern embankment, to the great benefit of the local economy. The fine Traffic Office building will, with only an extra



storey added to its portico and a revolving door (We think he might mean revolving - Ed.) make an excellent club which will gain an authentic historical flavour from being called the Victoria and Albert.

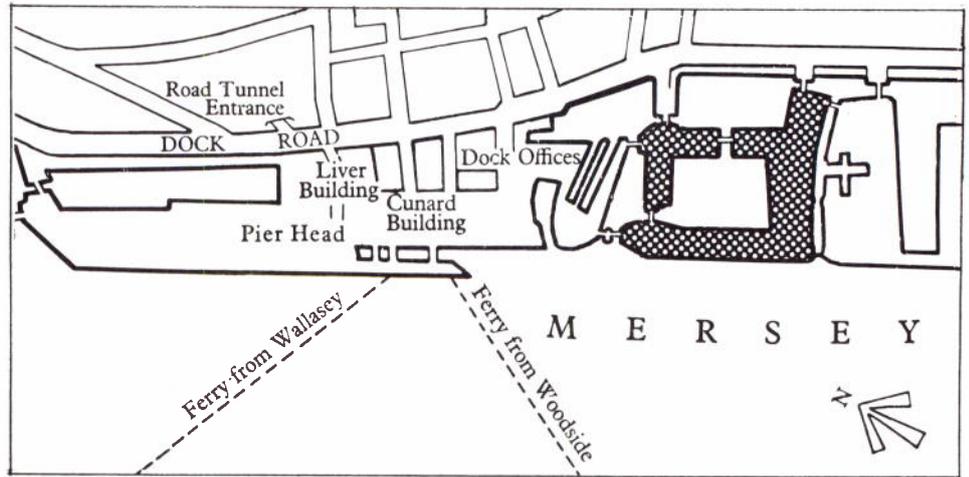
We anticipate that very large amounts of traffic will be generated by the trade centre, and it is for this reason that it will be necessary to dredge and infill Salthouse Dock, for car parking, and Albert Dock itself, having been similarly dredged and infilled will be provided with direct road access for service and exhibitors' vehicles and not overspill car parking at all. And if another person says the piles on which the dock is built might dry out and cause the whole lot to fall down I'll take my money away and spend it somewhere else, so there.

Of course there have been ambitious plans for this area before, and it is necessary in these unfortunate circumstances, for us to point out that this scheme is quite unlike its predecessors in that it is thoroughly practical and more than adequately financed. The estimated cost of the total package is £60M, some of which might be spent with local contractors, all of which is covered by guarantees from our backers, who must, of course remain anonymous, but who have implicit trust in our scheme, knowing as they do of our successful developments at . . . er . . . and . . . um . . . and . . . well everyone knows how good they are, anyway. Our architects have similarly broad experience in the conversion of historic buildings of the highest international importance, and we would like to make it clear that we have every confidence in them.

We are applying for the necessary Listed Building Consent for the scheme, and we would like members of the public, who are rightly concerned for the future of this great monument to feel that they can take part in a process of consultation and negotiation. Unfortunately there are certain groups upon whose motivation we cannot speculate who seem to wish to take us up on this, which is why we do not have a registered office, but any bonafide admirers can rest assured that communications addressed to Scroggins Developments International Associated, c/o Mrs Phelps, 17 Ashtree Grove, Peterborough, will receive our attention.

Members will by now have realised that any resemblance between the foregoing bilge and a plan which went to Local Inquiry on 13th January is more than coincidental. In the unlikely event of your being able to "follow that" by writing a parody of something which is already a self-parody you will richly deserve the valuable prizes the Editor has to offer. NB' It will not be counted to the merits of any scheme to suggest that the scheme might be dropped after listed building consent has been obtained and the site sold at an enhanced value. Such suggestions are considered inconsistent with the high ethical standards of the property development profession, and Scroggins might sue us.

"Filling in Albert". Liverpool's Albert Dock has been in the news again as the subject of a Public Enquiry into an application for Listed Building consent to convert the complex into a "trade, exhibition, and export centre" by Gerald Zisman Associates Ltd. Delegates to the 1980 AIA Conference were able to view the complex from the first stage site of the Merseyside Maritime Museum, and those who gained some



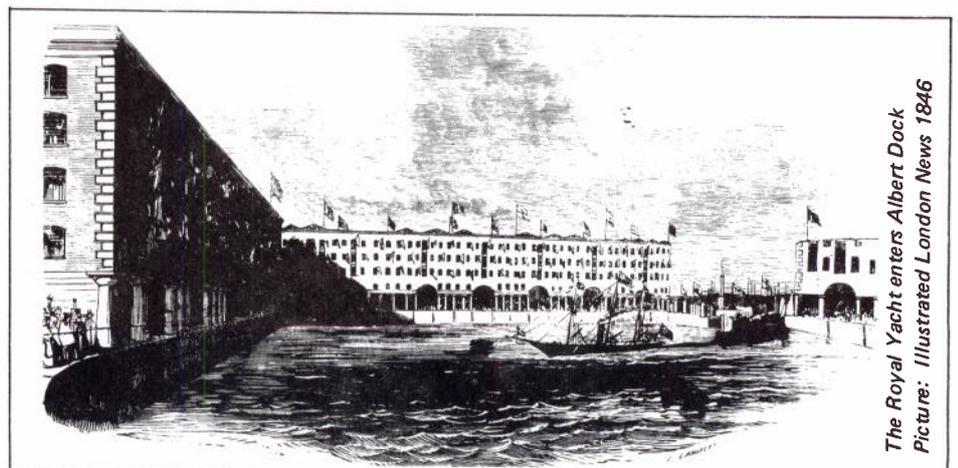
inspiration from the juxtaposition of brick, granite, iron, and water may be at an advantage in the competition announced in this Bulletin. For others, a brief resume of the stature and history of the Albert Dock may prove useful.

Although Liverpool's first charter arose from the potential need to ship troops to Ireland, its rise as an important trading port dates more from the 17th century. Not until the early 18th century was any thought given to providing proper port facilities. Thomas Steers supervised the first "wet" dock which was completed in 1715, and the next hundred years saw an increasing tempo of dock building on both sides (but mainly to the south) of the present Pier Head. Allied with this activity was the building of large numbers of warehouses in the growing town, necessitating the awkward transhipment of goods by cart through the streets, and 'losses' were said to be 20% of some cargoes.

The greatest period of dock expansion began in 1824 with the appointment of Jesse Hartley to the post of Dock Surveyor. During his "thirty-six years guidance with a despotic sway" of the physical development of the port, the water area in the dock system was quadrupled by the building of new docks and the rebuilding of all the existing ones; and the distinctive character of his design and architecture was indelibly stamped on the Liverpool waterfront. Sir Nikolaus Pevsner refers to his "cyclopean" style of granite masonry as being among the finest examples of "architecture parlante" in Europe, "an architecture for giants". Style apart, one of Hartley's most valuable contributions was a security wall between dock estate and the town, pierced by massive gateways whose whimsical gothic watch towers positively reek of a security-conscious Dock Committee.

Hartley's other immense achievement was the Albert Dock.

The idea of dockside warehouses was first put forward in 1803, no doubt following the West India Dock Company's work in London; but vested interests defeated all plans even in the face of a Royal Commission in 1821. Not until 1837 were the first plans for dockside warehouses in Liverpool approved, for a new dock to the west of the existing Salthouse Dock. Construction began in 1842, and Hartley designed the warehouses, in conjunction with Philip Hardwick, in 1843. The Albert Dock was opened by the Prince Consort himself in 1846, though the warehouses were not completed until 1849. The not-quite rectangular basin is surrounded by five blocks of five storey warehouses over brick-vaulted basements. A colonnade surrounds the dock itself, with massive cast iron columns supporting the classically proportioned brick-work above. The rear of the blocks, away from the dock itself, contain open courtyards at intervals, where hoists, staircases, and loading carts were under the eyes of watchmen. The buildings were constructed solely from non-combustible materials; inside, cast iron columns support wrought iron arched beams of inverted "Y" section, with brick vaulting between. The roofs are of wrought iron sheets on light iron trusses. These warehouses fulfilled their intended purpose for 120 years with very little modification; in addition, the Dock Office, with its famous cast iron portico, the Dock-master's house and other related buildings, and most of the original dockside furniture, have also survived. The difficulties of access since the early 1970s have at least curtailed the unofficial rape of "scrap metal" which has gone on apace in the rest of the south dock estate. A most



The Royal Yacht enters Albert Dock
Picture: Illustrated London News 1846

important survival is the great deal of hydraulic machinery - important because the Albert Dock incorporated the first large-scale application (in the world) of hydraulic power to cargo-handling. It is not yet known to what extent the original Armstrong equipment has survived inside and under the warehouses. The central power plant has gone, and the pump house itself (not the original, but a replacement dating from the 1870s) is in structurally poor condition.

Thus the Albert Dock is important for a number of reasons, and its status as Britain's largest Grade 1 listed building is a right and proper reflection of its true merit. Also right and proper is the concern felt locally and nationally at its decaying state, and at the way in which the local Planning Authority has seemed to welcome without discernment every scheme put forward for its development, conversion, demolition, or whatever. It is tempting, in looking at the demise of various schemes for offices, high-rise flats, marinas, and polytechnics, to hold up the Albert Dock as an object lesson on the difficulties of finding new uses for old and historic buildings; but that would be to assume that all the schemes had been sympathetic to the architectural, historical, and archaeological importance of the site, and had merely perished on the rocks of economics. Most previous schemes have been anything but sympathetic, and even the much-welcomed polytechnic conversion would have wrought major changes to the appearance of the warehouses by replacing the roofs with an extra mansard storey. Such treatment would certainly not coincide with the DoEs 1977 statement on the criteria to be applied to the conversion of buildings of outstanding interest. National, as well as local, attitudes have hardened over what may legitimately be done in the name of conservation and re-use. It was inevitable, therefore, that the latest proposals would be treated with deep suspicion, particularly when it was seen that the Planning Authority had given Listed Building Consent at a stage when there was an almost total lack of detail about the modifications intended. Noises were made in all quarters, and there was great relief when the application was "called in" by the Secretary of State for the Environment. The applicant seems to have been surprised by the ardour of the opposition, for at his request the Public Inquiry was postponed from October to January, and the scheme was modified to avoid demolition of some of the ancillary buildings which had been doomed at the stage of local planning approval.

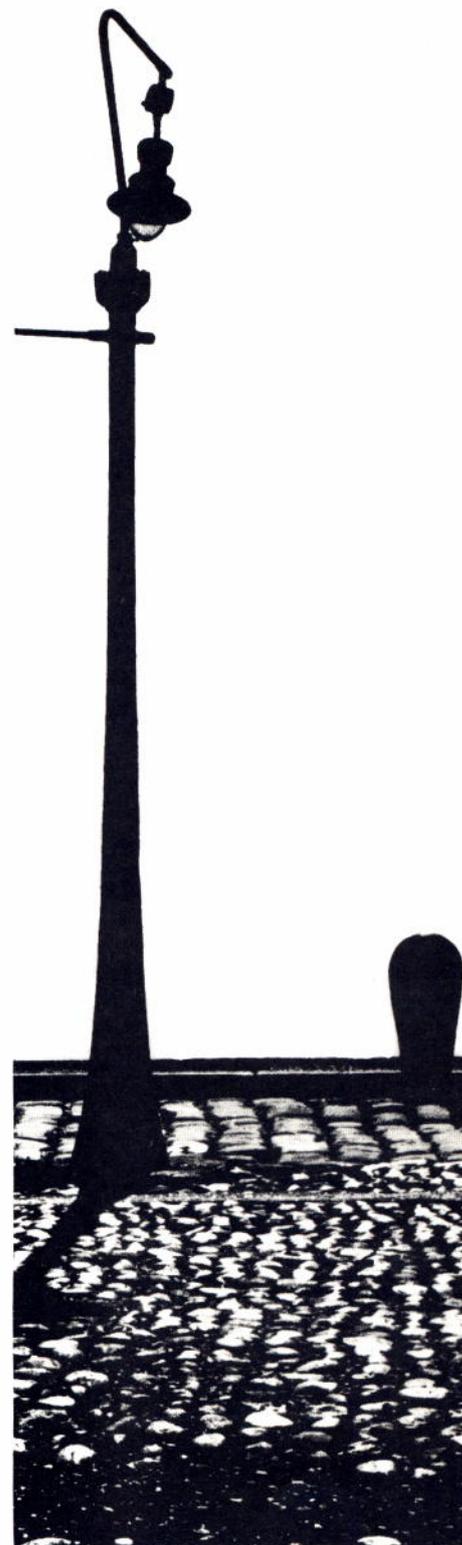
So it was that at 10 am on January 13th, Mr Michael Montague-Smith assumed the Inspector's chair and called to order a crowded committee room. It was an Inquiry destined to last six and a half days, during which the suspicions were heightened rather than reduced. The words may have been fine at times, but each "side" spends its time searching out the motives behind the words, and to some extent, the issues become muddled as they cross the floor. The applicant, of course, has the advantage of being able to construct his case before coming to the Inquiry: the objectors may only do so if the applicant's scheme is clear and detailed.

Counsel for the Applicant, Mr Peter Boydell, QC, was certainly out to impress. He was fully aware of the stature of the Albert Dock; he was sorry at the lamentable state of decay into which it had been allowed to fall; and the present application had been drawn up, therefore, to make "improvements to the Albert Dock" by

the demolition of "a few trivial and ugly excrescences". Mr Zisman was to be seen as a "saviour", providing new life for this now dead site by injecting some £20 million. Mr Boydell outlined the intentions of the scheme, stressing that the filling of the dock itself was essential, particularly for ensuring free pedestrian circulation between the warehouses on all sides. His witnesses, five in number, were then called to testify to the commercial necessity of the dock fill, and the continued safety of the structure with the new groundwater regime. This latter point has been a vexed issue, in that the western buildings are founded on hundreds of beechwood piles driven down through shore deposits to the underlying marls, and they might be in risk of collapse if the piles were allowed to dry out. Two witnesses supported the case that a sand fill would actually raise the water table around the piles; but their admission that the only evidence available on the piles had been obtained five years previously by consultants, who then advised that the only way to ensure continued safety was to maintain a water surface at the former dock level, was not likely to inspire confidence. There seemed to be some variations of opinion, too, on the real intended use for the proposed "piazza", and the possibility of buses and taxis haring around the filled square did not go down well at all. Most interesting of all, as the witnesses and particularly the consultant architects revealed their proofs, there began to appear a list of modifications to the tabled application. It was learned that the hydraulic pumphouse was no longer to be demolished, but now to be taken down carefully, brick by brick, and made available for re-erection elsewhere - perhaps even within a few feet of the existing site. It was learned that the dock was to be filled not to quay level, but to a height of 0.8 m below the quay - and that might yet become even lower! It became apparent that the glass screen formerly to be placed between the cast iron columns surrounding the dock was now to be placed some two feet behind them. It also transpired that the clause concerning the insertion of mezzanine floors cutting the line of the higher elliptical arches was to be removed. It now seemed quite certain that the 1843 cast iron bridge over the north passage need not be moved more than ten to fifteen feet, and perhaps not at all. It seemed to the developer now that perhaps it was more sensible to build a faithful replica of Philip Hardwick's clock tower on its original location, rather than the pseudo-edifice proposed for the other side of the complex. Perhaps there was really no need to demolish all the ancillary buildings at the south east corner of the site . . . and so the concessions crept out. Concessions they may have been, but they did not inspire confidence.

By the middle of Thursday morning it was the turn of the Liverpool City Solicitor to call his two witnesses to support the application. The City Planning Officer outlined his department's discussions with the applicant, and showed quite clearly that the various concessions had come about solely because of the objections raised by the various amenity bodies, and in no way through the concern of the planners for the site. It was very apparent that the sole criterion applied had been the possibility of job creation, an issue echoed with strong emotional overtones by the Chairman of the Planning and Land Committee.

Since the representatives of Merseyside County Council were confining themselves to cross-



examination of the witnesses, and not themselves giving evidence, the Inquiry now switched to the side of the objectors, led by Merseyside Civic Society. The Civic Society has over forty years' record of amenity work for Liverpool, and its representatives were well qualified and able to resist what they saw as an unsympathetic and unpardonable assault on Liverpool's most important building. The list of concessions may well have been calculated to take the wind out of the objectors' sails; but it only succeeded in drawing attention to the lack of detailed plans, and the carelessness of the planners in approving vague and general ideas. The poverty of the applicant's sympathy with the architectural and historical importance of the Albert Dock was heightened by the obvious regard of those who spoke for the qualities of the buildings; Dr

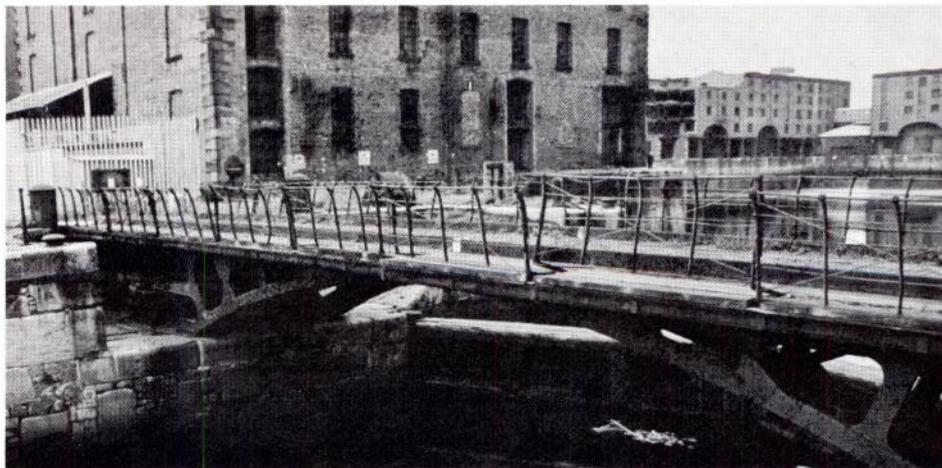
Quentin Hughes outlining the unique contributions of Liverpool to the history of architecture, and likening the infilling of the dock to the building of a supermarket inside the Parthenon!

And so it went on . . . the Royal Fine Arts Commission, the Georgian Group, the Victorian Society, Save Britain's Heritage, the Friends of the Maritime Museum. The Inspector could have been left in no doubt as to the strength of opinion against infilling of the dock basin itself, and indeed the point might have suffered through overstatement. The AIA was also represented, objecting to the dock infill, but concentrating its case on the risks of attempting to move the 1843 cast iron bridge, and the danger of losing the archaeological evidence of the hydraulic system and other quay and warehouse furniture; points rather underplayed by the other objectors. The Association was unhappy about the proposed demolition of the hydraulic pumphouse, and felt that hydraulic equipment should not be removed from the building without very careful consideration, and then not before detailed records had been made. At this point the representative was invited to submit the text of a condition to be annexed to the application, safeguarding this aspect. The invitation was roundly taken up, and when Counsel found it to be too onerous for his tastes, the Inspector agreed to its submission as additional evidence on behalf of the AIA.

Thus passed another three and a half days (with a rest-day on the Monday), until the final battle on Thursday morning. For the objectors, the Inquiry was likened to an Agatha Christie thriller; the locale was known, but not the characters, nor the plot, nor the intended victims. During the Inquiry the characters had appeared, one at least with no lines to speak (was that Mr Zisman himself, briefly appearing in the public seats?) The plot had been varied from day to day, and the victims, or some of them, had at last been revealed. But this was an application for an incomplete jigsaw; the applicant had no experience, had not proved his capacity, and had not earned the right to carry out this scheme. The intentions of the applicant, it was argued, were still suspect, and his understanding and sympathy with the buildings was far from satisfactory. Too many details were to be the subject of future applications, which would be granted automatically by an indiscriminating planning authority. In reply, Mr Boydell was conciliatory and obliging. The City Council and Planning Department had been so helpful: the greatest care would be taken at all stages; the infilling of the dock was not irreversible: the buildings were to be saved from certain collapse in the near future: it was important to boost employment and trade. This might not be the ideal scheme in an ideal world, but it was a **good** scheme in **this** world.

And so it ended - the Inspector postponing his lunch in a forlorn attempt to see the Albert Dock whilst the falling tide might still hide some of the silt, and allow something of the hallowed reflections, which had been so often the centre of argument, to be seen.

One comes away from such an Inquiry with mixed feelings, the outstanding one being that someone else is called upon to make the final decision. It is not a task to be envied. The evidence is complex, and the issues at stake are about as clear as the water in the dock itself. What is very clear is that there are strong opinions on both sides; a genuine wish for the long-term protection of heritage in the race of what might only be short-term economic hard-



The cast-iron swing bridge across the North Passage, designed by Jesse Hartley, manufactured by Haigh Foundry, Wigan in 1843

ship on the one side, and a strong condemnation of "them b . . . conservationists" by the grass roots, the "silent majority". It is this attitude which is reflected - perhaps even used as justification - by the City Council; but can one blame them in an area with 17% unemployment? In the face of this highly emotive issue, conservation tends to become a dirty word, and the most circumspect conservationist loses some credibility.

There has been another clear theme too - that a great deal of the case, on both sides, is based on supposition. The beech piles **will** be safe, it has been argued; yet there has been no recent investigation into their present state. The scheme **will** be commercially viable, it is claimed; but no investigations of letting potential and cost have yet been attempted. The scheme **will** create up to eight thousand new jobs, but the uses of the buildings are not yet finalised. Future generations will see Liverpool's best buildings as important as those of Florence and Venice; yet they will not catch the sun quite so readily. It is possible that the conservationists may too easily make assumptions because there is very little experience on which they can draw. The Albert Dock far transcends in scale any rehabilitation schemes for industrial buildings in this country, and even the Quincey Market scheme in Boston, U.S.A, cannot claim such an outstanding starting position. What is desperately needed is experience of a major scheme for the re-use of a major complex - a successful scheme, that is. With the hindsight of the Euston Arch and St Katherine's Dock, and with great care and devotion, there would be crucial lessons to learn. It would be a disaster to allow the Albert Dock to moulder away to a condition which can only be met by demolition. How will future generations see Liverpool then?

One wonders what Jesse himself would have made of all this excitement and argument. He would have been flattered, no doubt - but perhaps he saw function as the cornerstone of his work . . . and that has gone already.

John Crompton wishes to point out that the opinions expressed in the closing paragraphs are entirely his own. They were not in any way presented as evidence to the Inquiry.

Herefordshire Waterworks Museum Trust, the quarterly journal published by this Trust is always of considerable interest and is of a particularly high graphic standard for a relatively small but active local society. The Autumn edition of the journal has a very eye catching cover, nothing to do with industrial archaeology, so that it will probably sell more

copies on the Museum bookstall. Contents include details of visits to Cruquius, the Severn Valley Railway and South Wales. Further details of the society and their excellent Museum can be obtained from the Secretary, H R Penhale, 87 Ledbury Road, Hereford.

AIA Education Group Conference, James Gracie Conference Centre, University of Aston in Birmingham, April 25th and 26th, 1981.

Preparations are in hand for the above Conference the theme of which is the provision of resources for the teaching of industrial archaeology at all levels from primary to adult education.

The provisional programme is as follows:

Saturday 25 April. The organisation of visits to museums and sites: Dr Francis Celoria, Director, Gladstone Pottery Museum. Visits for groups with special interests: Graham Carter, Montagu Motor Museum. Industrial Trails: Don James, Clwyd Council. What should IA teach: Discussion led by John Crompton.

Sunday 26 April. Back-up materials: Peter Semmens, National Railway Museum. Research opportunities in Libraries, Record Offices and Museums: David Dixon.

At whatever level you teach Industrial Archaeology, then, there will be something of interest to you. Send off the booking form or write to David Palmer, Department of Electronic and Electrical Engineering, University of Aston in Birmingham, Gosta Green, Birmingham.

Royal Forest of Dean Museum and Heritage Centre.

If just two years ago you had your first public meeting and knew that in July this year you might be taking over an old mill with nearly four acres of land which could become ten acres, what would you do next?

That is the problem facing the Royal Forest of Dean Museum and Heritage Centre Project. The committee are already looking at a road widening scheme, access to the site, district sewerage, and planning Phase One of their development.

What they need is professional advice. Their Centre must put down roots and grow. This they think means a Centre Director who would need to have professional experience, the ability to work with the Trustees, and the management committee; organise volunteers; spearhead fund raising efforts; develop the site from a car breakers yard with buildings in need of repair

and administer the Centre for the benefit of the public.

Since the inaugural meeting was called by the Royal Forest of Dean Rotary Club on the 21st March 1979 a project committee has been elected and have looked at a large number of sites before the Old Camp Mill at Soudley - GR:SO 665105 (we are told there was a mill there in 1610) - was given to the Forest of Dean District Council by Rotarian Stanley Joiner for the establishment of a Museum. Mr Joiner's family had owned and worked the mill when they first came to the Dean.

The Project Committee have had Trust Deeds prepared and accepted; drawn up plans for outline development of the site, and organised local exhibitions. These have been held in Coleford, Cinderford, Lydney and in a number of villages and have resulted in offers of old artifacts, photographs and plans being exhibited. They were staffed and organised by a local committee in each town or village. It is the intention to hold more in the future when the Old Camp Mill is no longer the priority. The potential of the site is enormous situated close to an old British Camp and will probably soon have a picnic site adjacent. The old mill pool and dam could be restored and the waterwheel rebuilt. The Trustees represent many facets of local life and it is intended to plan a Centre representative of the Forest in every way and thus with universal appeal.

The Director would be expected to promote and encourage this enthusiasm possibly from July 1981 and a salary of £8,000 plus help with relocation expenses is envisaged.

Enquiries to Des Nellins, Chairman of the Project Committee, Ridgeway, Newland, Coleford, Gloucestershire GL16 8NJ. For someone with the necessary qualifications, experience, and the ability to get up and go this could be just the job.

Saltford brassmill. The mill at Saltford near Bath, housed the last **brass battery** mill in the country which closed in 1908, leaving only the water-powered rolling mills working until final closure in 1925. Production of brass was carried out at Keynsham and taken to Saltford where the cast slabs of metal were rolled to form brass sheet. The sheet was then 'battered' or beaten, by water-powered hammers to form hollow-ware vessels.

The mill has a remaining furnace, believed now to be unique but once typical of the local industry. Worked brass needs to be softened, or annealed, to rectify brittleness caused by manufacturing processes before further work can continue. In the early days of the Bristol industry this was carried out by loading the brass into trolleys which were then sealed with clay to prevent damage from sulphurous coal fume which was present inside the furnace. A later and more refined development was evolved by constructing a furnace with double walls so that furnace gases could be drawn up in the cavity between them. This innovation protected the brass in the inner chamber making it unnecessary to seal the trolleys. Developed by the local industry, this type of furnace does not appear to have been built elsewhere. Consequently, the almost complete structure remaining at Saltford, together with the two outer shells of furnaces still standing at the Kelston Mill site, are believed to be the only remains of this type of structure, and have attracted the attention of industrial archaeologists and historical metallurgists from all parts of this country and

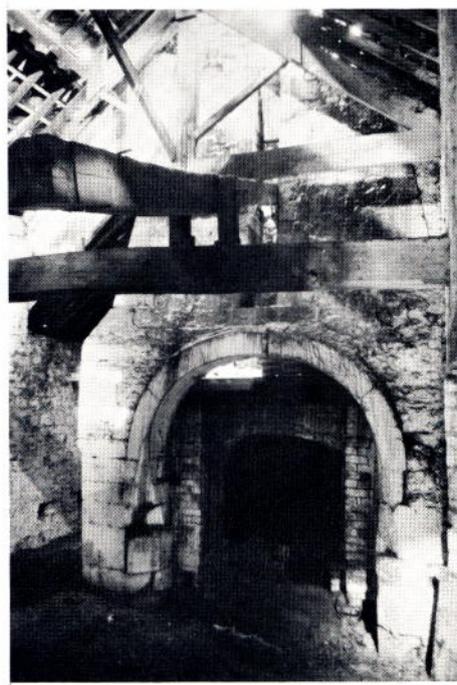
much further afield.

The Saltford Mill is now semi-derelict, and the furnace, together with its balance beam which operated the sliding fire-door, is in a dangerous condition. This is the most important part, historically, of what still stands. Apart from the furnace (of which there were originally four), the mill-site now consists of a complex limestone structure, roofed in pantiles, which housed the rolling and battery machinery. Two of the original 5 waterwheels still remain in good condition, and the sites of the remaining 3 are visible; the water courses and weir are still intact.

Since its closure, the Mill site has been used principally for storage and the building and repair of small boats. The buildings are of little practical use to the present owners; however, although he does not have the resources to repair the historically valuable parts of the site himself, he is willing to lease these parts (at a peppercorn rent) to an organisation which will repair them and for this area then to be put to use as a small museum concerned with the history of industry in the Avon Valley. This is where the involvement of the Bristol Industrial Archaeology Society and the Avon Industrial Buildings Preservation Trust begins.

The Trust is completely independent and has no financial or legal connection with any other body although BIAS and Avon County Council have assisted in its establishment, as a company, limited by guarantee (without share capital) and as a Registered Charity. Saltford Mill will be the first project to be undertaken by the new organisation. A comprehensive survey and schedule of repairs necessary has already been carried out at Keynsham and taken to Saltford for immediate stabilisation and weather-proofing of the historically valuable parts of the site. This work, which will be partly financed by grant aid from the Department of the Environment, will naturally be carried out before the scheme progresses to the conversion of the interior to a museum and interpretive centre.

Work at a voluntary level, mainly by BIAS members, has made a start in preventing further deterioration, in the building and its unique annealing furnace. The first phase of rescue work, which is estimated to need about £10,000 has already received some **promises** of financial help



from industry and public bodies, but needs cash in the bank to get off the ground. Treasurer of the trust, Robin Lewis of 11 The Grove, Winscombe, Avon BS25 1JH will be pleased to receive donations, or subscriptions for trust membership at an annual fee of £3.00.

More about Albert. If the news of the Albert Dock inquiry has wetted your appetite for a history of this fascinating complex may we recommend **Seaport** by Dr Quentin Hughes, published by Lund Humphries in 1964. Apart from its obvious industrial archaeological interest it is a joy to handle, with glorious photographs, a thoughtful, evocative text and several useful maps. One of these forms the basis of our plan on page 2, and the illustration on page 3 also comes from this book.

Past Issues of the Bulletin. For those members who may wish to complete their runs of AIA Bulletins it is possible to purchase all back copies from the Membership Secretary. Six issues of the Bulletin were issued per year until the end of Volume 4 when it was decided to issue only four larger parts from Volume 5 onwards. Copies of any of these issues can be obtained at a cost of 20p plus postage and packing from the Membership Secretary, The Wharfage, Ironbridge, Telford, Shropshire TF8 7AW.

Shell Inland Waterways Restoration Awards. Shell UK Limited and the Inland Waterways Association announce their third award scheme to encourage enthusiasts throughout the country to restore and improve Britain's waterways. The scheme, which will take place during 1981 will make £25,000 available to voluntary groups, giving incentive to complete projects which may have been held up through lack of funds.

More than 164 voluntary groups received financial assistance through the two previous award schemes.

Four categories of projects will be eligible for awards:

- 1 The restoration and improvement of navigation and navigational works on rivers and canals.
- 2 The restoration and improvement of other stretches of water.
- 3 Restoration and conservation work on buildings, such as water-mills, warehouses, etc.
- 4 The improvement and enhancement of the water environment, for example the clearance of towing paths, improvement of access, the provision of waterside facilities and the creation of amenities for everyone to enjoy.

The number and amount of the awards will be decided by adjudicating panels in England, Scotland, Wales and Northern Ireland.

The closing date for entries is 31st July 1981, but projects do not have to be completed by this date, as entries will be judged on what has been achieved so far, and on what may be achieved ultimately.

Mr Sam Gallacher, Public Affairs Director of Shell UK said "This is the third such scheme run by Shell and the IWA and our real aim is to encourage people to work on projects which everyone can enjoy. The idea is not just to put money into schemes which are for the sole benefit of the waterways enthusiast, indeed the adjudicating panels will be looking for projects which will benefit the whole community".

Full details of the scheme, including entry forms, may be obtained from the Shell Inland

Waterways Restoration Awards, UKPA/131,
3 Savoy Place, London WC2R 0BN.

A New Service to Members. Most of us have items of plant or equipment which do not fit in with our particular areas of interest. On the other hand all of us can identify items of which we are in urgent need. Sometimes one member's surplus might meet another's need. In addition we are frequently offered items by commercial organisations and unless we can quickly identify a potential user it is likely that the opportunity will be lost.

To help overcome these problems a Central Register is being set up which will contain details of items available for disposal and items needed. The register will be set up and maintained by Andrew Neil at his home in Birmingham. He will be responsible for matching needs and offers. All you have to do is tell him the relevant details.

If you have any information to submit please contact A H Neil 47 Blakeland Road Birmingham B44 8AU. Tel 021 356 8125 after 6 pm Mon/Wed/Thurs/Fri.

A bellfoundry in Keynsham. A few of the members attending the early 1964 Bristol Folk House course in industrial archaeology, from which the Bristol Industrial Archaeological Society eventually grew, had been involved previously in excavations five miles away at the site of Keynsham Abbey, which was organised by the Folk House Archaeological Club. Work on the remains of this medieval abbey has since continued over the years although contact with BIAS was lost as separate interests became more specialised. In August 1980 the monastic site dig quite suddenly became relevant to industrial archaeology when the partial remains of a furnace were uncovered in a previously untouched corner of the abbey chapter house. It was constructed on and through the medieval tiled floor, with abbey tiles used in the furnace hearth, and scraps of metal and slag present. Barbara Lowe, assistant to Ted Mason in charge of the site called to BIAS for help and, after a brief inspection, it seemed worth persuading Professor R F Tylecote, archaeometallurgist from the Institute of Archaeology to visit the abbey.

The remains were of a reverberatory furnace, up to the level of the 5 ft long oval hearth, with a sloping firebox and ashpit in good condition but the roof (which probably would have been vaulted and semi-circular in shape) was completely missing. Professor Tylecote's analysis of the metal showed it to be a bronze, an alloy of copper and tin with a tin content of 25%, a composition which would be too brittle for any product other than bells. Clearly, he writes, the furnace has been used for bell casting. From its stratification and position it is post-dissolution, after 1539, but could have been in use up to 1750 from the type of construction. There is no known documentary evidence to explain the existence of a bell foundry of this sophistication on the site. Bells were replaced in the parish church during the 1600s but the furnace is of a standard which indicates an extensive industrial enterprise. The Bilbie family of Chew Stoke and the Purdues of Bristol, both long-lasting bell founding families relevant to the period do not appear to have had any Keynsham connections, but research is continuing.

The Post-Conference Activities Organised by the North-West Society for AI & History in



September 1980 were well supported by AIA members who took the opportunity to examine a wider area than Merseyside alone. Unfortunately the weather did not continue as kind as during the Conference weekend itself, as witnesses to the suddenness of the storm at Leasowe Lighthouse will agree. But there was variety to suit all tastes. On Wirral we visited the North-western Museum of Inland Navigation and Port Sunlight, as well as having a second look at the world's largest surviving grass-hopper beam engine. In South Liverpool there were visits to British Rail's docks at Garston and the abandoned **underground** Dingle station of the Liverpool Overhead Railway.

The party also ventured to the Dee estuary and beyond, to see the relics of coal mining and brick-making around Buckley, and the extensive industrial remains of the Greenfield Valley where cotton mills, copper battery and rolling mills, and many other concerns, took advantage of the non-freezing drainage water of the Halkyn lead mines. Our photograph shows some of the participants examining the remains of the Buckley plateway system with trowels and hand-brushes at the ready. Is this a 'first' for excavations at an AIA Conference?

Advice for Voluntary Groups. The Directory of Social Change is a small and lively organisation dedicated to helping voluntary organisations to become more businesslike. It holds regular seminars in London on such topics as **Understanding VAT, Fund Raising and Managing a Charitable Organisation.** Low-priced publications are available on a variety of topics which will be of practical use to many societies and preservation groups. Titles include **Raising Money from Trusts, Raising Money from Government, Raising Money from Industry, Raising Money through Special Events, Charitable Status, a Practical Handbook** (£1.50 each), **Campaigning and Lobbying and Dealing with the Media** (£2.25 each) **Fund Raising, a Comprehensive Handbook** (£2.75) and **Planning your Environment** (£3.95). Further details of these and other publications from the Directory of Social Change, 9 Mansfield Place, London NW3.

Chemical Industry Study Group. It is proposed to hold a meeting in association with the

Education Group at the James Gracie Conference Centre, University of Aston on 25/26 April 1981.

Subjects to be discussed are Chemical Industry of Cleveland, Sulphuric Acid Plants, Synthetic Fertilizer Manufacture, Chemical Industry of Cumbria, Coal Gas Manufacturing Plants, Glass Manufacture, Documentary Sources of Information and their Preservation (including photographs, engineering drawings, advertisements, catalogues etc.)

This group meeting is open to any interested person and will commence at 2.0 pm on Saturday 25 April and terminate after lunch on Sunday 26 April. The cost of the meeting will be non AIA members £24, AIA members £22, full time students £19, non-residents £12.

Accommodation will be in single study bedrooms. Bookings should be made to Mr D S Palmer, University of Aston, Sumpner Building, 19 Colehill Street, Birmingham B4 7PB by 1 April 1981. Cheques should be made payable to the AIA Education Group.

Please contact Mr D M Tomlin, 13 Albert Road, Eston, Cleveland TS6 9QN if you intend to join the meeting. Suggestions of topics for discussion should also be sent to him.

Whitecliff Furnace, Forest of Dean. An iron works was built at Whitecliff near Coleford, Glos in 1798 by Samuel Botham of Uttoxeter in partnership with the Bishtons and W Phillips of Shropshire. James Teague of Coleford was probably also an original partner. By about 1802 the concern belonged to Teague & Co but the partnership details are not clear because Botham had withdrawn by 1801, whilst Bishton and Phillips seem to have ended their association with the site well before 1808. In that year the partners included James Teague, Rev Isaiah Birt (who was also manufacturing pigments and paints), and a Thomas Halford, a wealthy London stockbroker.

In 1808 one of two furnaces was producing about 20 tons of coke pig iron per week. This was processed for the making of tin plate, probably at Redbrook on the Wye. Halford wished to increase output and contacted the eminent metallurgist David Mushet who was at that time engaged at the Alfreton Ironworks in Derbs. Mushet acted as consultant to the works and subsequently became a partner with Halford after redesigning and rebuilding two furnaces and starting a third. He settled in Coleford in 1810 and lived there for the rest of his life even though his connection at Whitecliff was short lived. He wrote most of his famous Papers on Iron and Steel in Coleford and published them in 1840. His son Robert Forester Mushet, became no less eminent than his father in later years.

The ironworks were carried on by Halford but he became bankrupt in 1816 probably due to the recession following the Napoleonic Wars and the works became idle. So far as is known they were never worked again, and thus the extant furnace represents the early coke blast furnace technology with no modification later than the blowing out date.

One furnace stack has survived to this day, a dramatic mass of masonry dominating the Whitecliff Valley. The late Reg Morton wrote of it in 1967: 'The furnace at Whitecliff is probably the best of its type in the country, certainly I know of no better'. In the same year the furnace was subject of a building preservation order and in 1976 was scheduled as an ancient monument by the DoE. Welcome though these moves were it became clear that they would not prevent eventual loss of the



stack which for the last 170 years has suffered weathering and some stone robbing. In 1978 a local trust was formed to investigate possible preservation and was able to purchase the furnace. In 1980 this trust became the White-cliff Furnace Committee of the Historical Metallurgy Society Ltd. Its members include Sir Campbell Adamson, Stan Coates, Dr Cyril Hart, Dr John Kay (Hon. Treas.), Doug Maclean, John Pettit, Ian Standing (Hon. Sec.) and Roger Tomalin (Hon. Architect) together with Mr and Mrs Brown, the previous owners.

A detailed specification of repair has been approved and put out to tender. This has indicated that £50,000 are needed to undertake and complete the work. The Ancient Monuments Secretariat offered £15,000 in 1979 and a major money raising operation started in 1980. The current world recession is not helping progress. The Trust would be delighted to receive any donations and/or suggestions for finance. We would also welcome any help with tracing more information about Thomas Halford. His address in 1808 was 12 Finch Lane, Cornhill, London. He was described by contemporary sources as 'a man of fortune but not of science'. He expended perhaps £30,000 over the years 1805 - 1810 on the ironworks, collieries and other industrial concerns in the area. He was bankrupted in February 1816. Papers about this probably exist and any suggestions would be welcome. Information on a man named Teague who was working at the Neath Abbey Ironworks in 1808 and any industrial information on the activities of the Rev Isaiah Birt would also be useful. A detailed history of the first ten years of the ironworks is in press by the Glos Soc Ind Arch whilst part two, concerning the Mushet Halford expansion is in preparation. The Trust can be contacted through Ian Standing, Rock House, Coleford. Glos GL16 8DH.

Affiliation of Local Societies to the AIA. Although the Association is an organisation of individual members, societies are encouraged to affiliate so that they can have a voice in national matters and in order for their own members to be aware of what is happening on a national basis. The definition of the word **society** is at the discretion of the Council of the Association for Industrial Archaeology.

- a The affiliation fee is £5.00 at the present time and will be raised to £8.00 from 1 July 1981.
- b Societies affiliating will have one vote through the Secretary of the Society in question.
- c Up to 10 members of the affiliated society will be admitted to the AIA Conference at the AIA members rate.
- d Each society will receive five copies of the AIA Bulletin quarterly.
- e Members of affiliated societies are entitled to purchase the Industrial Archaeology Review at the discount price.
- f The AIA intends to hold Conferences and Seminars to bring together members of affiliated societies to discuss common problems.
- g The Association will endeavour to assist local societies who need advice of any type (eg. Insurance, listed building applications, fund raising or advice with publication and research).

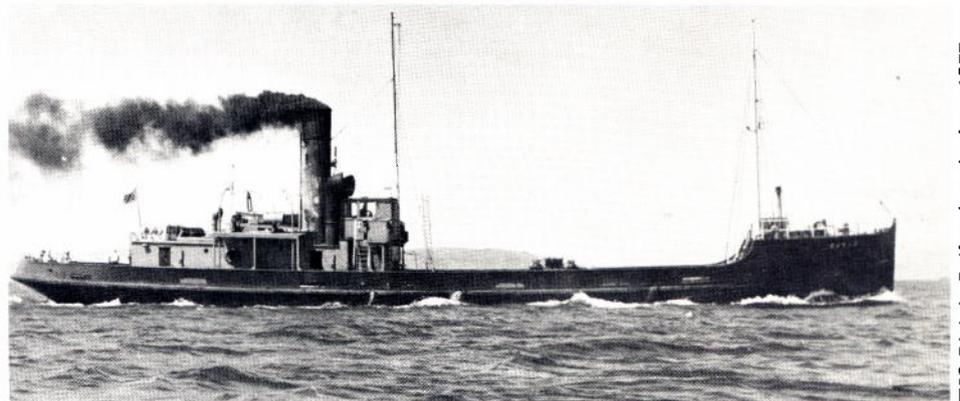
If your Society wishes to join the Association for Industrial Archaeology as an affiliated member please write to Membership Secretary, AIA, The Wharfage, Ironbridge, Telford, Shropshire TF8 7AW for an application form.

Ulster Shows the Way. No single museum in Britain can match the record of the Ulster Folk and Transport Museum in preserving ships and boats. A collection of twenty working boats from all parts of Ireland, several of 19th century date and one fishing boat which worked from

1877 until 1973, has been built up at the museum's Cultra Manor headquarters in County Down and at storage locations elsewhere. The interest generated by this collection illustrating Ireland's important maritime tradition has encouraged the Museum towards more ambitious acquisitions. Headlines were made last year when the 3 masted topsail schooner *Result* built of steel at Carrickfergus in 1893 and one of the last British registered vessels trading under sail when withdrawn, had to be moved by road from the Belfast drydock where she had been overhauled to a land-locked display location at Cultra Manor, necessitating an elaborate programme of temporary road closures and removal of overhead wires.

More recently the museum has imaginatively acquired Belfast's coal-fired sludge steamer *Divis* which for 50 years until her retirement in December 1978 made regular trips from Belfast Lough dumping inert sewage sludge in the Irish Sea. The vessel was built by Workman Clark (1928) Ltd, who also supplied her twin triple-expansion engines, fed at 180 psi by a single-ended Scotch boiler to give a service speed of 9½ knots.

The Museum made a very full visual and sound record of the *Divis* at work before she was withdrawn from service. The 357-ton vessel is berthed at present at the Milewater Basin in Belfast Harbour, in the same berth formerly occupied by *Result*, while plans for her future are considered by the Museum. In view of her generally sound condition and the high standard of maintenance she received while in service, we hope that the Museum will continue to operate the *Divis* as a working exhibit and that her classification as a seagoing vessel will be retained.



TSS Divis in Belfast Lough, June 1977

AIA Calendar

Windmills
21 March

Steam Weekend
21 - 22 March

Timber Buildings and their Restoration
3 - 5 April

Annual day-meeting in London, organised by Wind and Watermill Sections of SPAB, 55 Great Ormond St., London WC1N 3JA, Tel. 01 405 2646/4541.

At Museum of Science and Industry, Newhall St., Birmingham. Many exhibits in steam, free admission.

Annual weekend conference organised by Avoncroft Museum of Buildings. Residential accommodation at University of Warwick, with visits to Warwick and Stratford-upon-Avon. Residential £45, non-residential £25. Details from Avoncroft Museum of Buildings, Stoke Heath, Bromsgrove, Worcs. Tel. Bromsgrove 31363.

**Educational Use of Museums,
Ancient Monuments and Historic
Buildings**

6 - 11 April

**Western Counties IA
Societies Regional Conference**

11 April

**Industrial Archaeology and
Landscape**

24 - 26 April

**International Confederation of
Architectural Museums**

26 April - 1 May

Traction Engine Rally

May 10

Canals of the Peak District

May 25 - 29

**Conservation as an Element
of Urban Planning**

June 14 - 26

**Industrial Archaeology and
Transport History around
Manchester**

July 28 - 30

**Inland Waterways Association
National Rally and Waterside
Arts Festival**

August 10 - 16

**Historical Metallurgy Society
Conference**

September 18 - 20

Short residential course conducted by F W Hawkins HM Inspector of Schools and J G Hurst, Assistant Chief Inspector of Ancient Monuments. At University of Newcastle-on-Tyne. Topics for study will include Seaham Harbour and Beamish Museum. No charge for tuition; board and lodging are £75. Details from Department of Education & Science, Elizabeth House, York Road, London SE1 7PH. Tel. 01 928 9222.

This event, the twelfth in the series will be organised by the Worcester and District IA and Local History Society at the Worcester College of Higher Education, Henwick Grove, Worcester. It will follow the usual format with short contributions from participating societies and a period for discussion. Fee, including coffee, lunch and afternoon tea, £3.50 with a 50p reduction if booked before 31st March. Details from Don Barton, 94 Wolverley Road, Franche, Kidderminster, Tel.. 0562 60393.

Weekend course at Rewley House, Wellington Square, Oxford. Speakers include Neil Cossons, Barrie Trinder, Jennifer Tann, Jeremy Lowe and Stafford Linsley. Residential £29, non-residential with meals £20, non-residential without meals £10. Details from Oxford University, Department for External Studies, Rewley House, 3-7 Wellington Square, Oxford OX1 2JA.

Second international conference at RIBA with visits to London churches and housing schemes and a day in Brighton. Conference fee £100 non-residential. Details from Jan Van der Wateren ICAM Conference Organiser, RIBA, 66 Portland Place, London W1N 4AD, Tel. 01 580 5533.

Unique urban event organised annually by Museum of Science and Industry in Birmingham. Details from 021 236 1022.

Residential course at Peak National Park Study Centre, inclusive fee £73. Details from Peter Townsend, Principal, Losehill Hall, Castleton, Derbyshire S30 2WB. Tel. 0433 20568.

Residential course for senior practitioners with decision-making responsibility, organised for UK and foreign participants by British Council. To be based in Chichester. Speakers include Marcus Binney, Donald Insall, Dr Derek Linstrum, Professor Roy Worskett and Lord Montagu. Course fee £525. Details from: British Council (Course 141), 65 Davies Street, London W1Y 2AA. Tel. 01 499 8011.

Mid-week non-residential course organised by D D Brumhead and A D George. Varied programme of visits concentrating on road and air transport. Non-residential £4. Numbers limited; enquiries to A D George, Dept. of General Studies, Manchester Polytechnic, Chester St., Manchester M1 5GD.

To be held on the River Aire, in the Centre of Leeds; over 500 boats expected. Week-long Arts Festival will be held in Aire and Calder Navigation Warehouse, Further details as follows:

Boat entries: David Chatterton, 5 Riviera Gardens, Leeds LS7 3DW, Tel Leeds 628855.

Trade and Society Stands: Michael Freedman, Bridge House, Westgate, Leeds, LS1 4ND. Tel. (office) Leeds 442331.

Based at Bath University, with visits to Mendip and other sites. Estimated cost £43. Details from Joan Day, 3 Oakfield Road, Keynsham, Bristol BS18 1JQ.

Industrial Archaeology Books. The Ironbridge Gorge Museum Trust runs a considerable number of retail outlets and has been concerned for many years to sell those publications of greatest interest to the industrial archaeologist. It is recognised that although the publications produced by major publishers are sold, that many worthwhile small print publications are not on sale. For this reason, the Museum is inviting every industrial archaeologist and industrial archaeology society to despatch 10 copies of any publication produced by that society to the Museum Trust for sale in the Museum shops. It is understood that these publications are on a sale or return basis and that the normal retail discount will be allowed. It is hoped eventually that every single small print publication will be stocked by the Museum shops and that a Quarterly list will be issued for distribution to AIA members. If you are interested in joining the scheme please contact the Curator, Ironbridge Gorge Museum Trust, Ironbridge, Telford, Shropshire TF8 7AW.

Sheffield Members. At the last AIA Conference the Secretary was asked by a delegate to provide a list of names and addresses of all people living in Sheffield so that the possibility of starting a Sheffield IA group could be investigated. Unfortunately the Assistant Secretary did not take a note of the name and address of the member and perhaps that person could contact Stuart Smith as soon as possible.

Vanishing Members. Several members seem to have moved house in recent months without informing the Association of their new addresses. Newsletters have been returned marked 'gone away' or 'not known'. In the hope that they or friends of theirs will write to the Association to say where they are now, we name them:-

R C Hodrien
A F Thomson (Late of Ellesmere)
L J Stead (Late of Chelmsford)
Dr V M Shelley (Late of Skipton)
J W Frazer (Late of County Antrim)
Dr C M Kessler (Late of Oxford)
C J Q Evans
P W Allen
J E Turtle
L Livingstone
H A Robinson

Clues, details or any other information to be sent to the Assistant Secretary at The Wharfage, Ironbridge, Telford, Shropshire, TF8 7AW.

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Bulletin

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).