

## Penetrating the Fortress

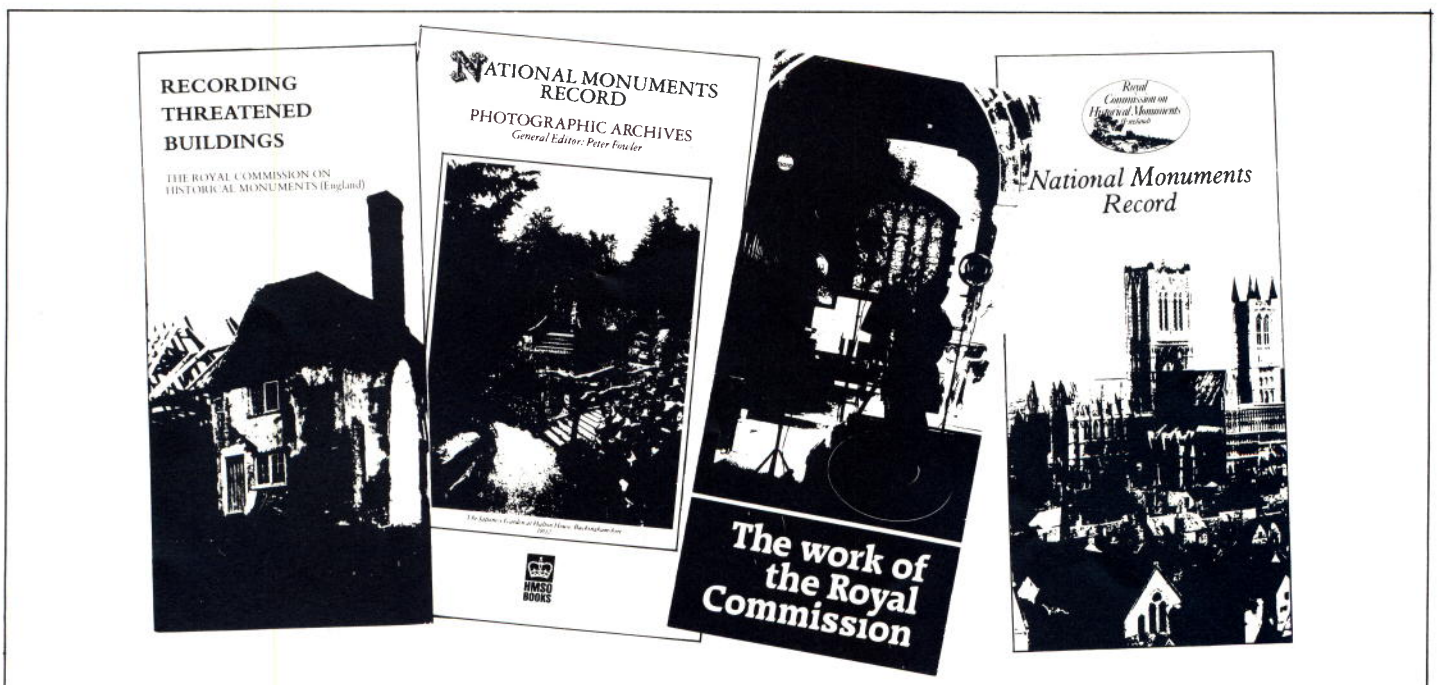
**Inside Fortress House.** On Tuesday 1 May a delegation of AIA Council members visited Fortress House in London, headquarters of the Historic Buildings and Monuments Commission for England, being invited as a result of requests by the Association to know more about how and why monuments are scheduled, and buildings listed. The delegation consisted of Bob Carr, John Crompton, Douglas Hague, Stephen Hughes, David Palmer and John Powell and spent an informative day talking to members of the staff and inspecting the facilities available. Some of the salient points which arose during the discussions are set down here for the benefit of AIA members who might have found the scheduling and listing procedures as baffling as Council members have. The points are mentioned in the order in which they arose during the day.

The morning session consisted of a meeting between the delegation and Arthur Swift, Secretary of the Ancient Monuments Advisory Committee (England), and Peter White, Principal

Inspector of Ancient Monuments for England. Mr. Swift began by explaining the present organisation of ancient monuments administration in England. Much of their work had formerly been carried out by the Department of the Environment, but under the terms of the recent Ancient Monuments Act the present Historic Buildings and Monuments Commission for England was established. A small number of staff concerned with Ancient Monuments are still directly employed by the DoE and all the money is channelled through the DoE. Also all final decisions are made by the Secretary of State but the professional advisors now work for the new Commission. This means that the Secretary of State no longer has professional advisors in his own department, but takes advice from those in the Commission. Later in 1984 the new Commission will become somewhat different in its mode of operation than the former DoE department, when it assumes a role almost as an amenity society as well as retaining its status of statutory advisor to the Secretary of State. This will be when Local Authorities begin referring certain cases concerning listed buildings directly to the new Commission without having to wait for information from the DoE before being able to comment on a particular case. This new flow of information should lead to a more open relationship. Ancient monuments' Inspectors

will now be able to attend Public Enquiries to give evidence. Lord Montagu, Chairman of the new Commission was reported to be keen to see the involvement of amateur groups and preservation societies within the work of the new Commission.

The delegation expressed regret that the AIA is not yet one of the organisations informed automatically of threats to listed buildings, having to rely on the CBA for information. The delegation also asked about the instructions issued to the Commission's Inspectors, but was told that these were confidential. As a general rule, however, most unaltered buildings erected between the years 1700 and 1840 would be listed. After 1840 the listing of buildings would be very selective. Local considerations would obviously be taken into account, so sole surviving examples of a particular type of structure would be more likely to be listed than numerous examples of the same type. The delegation mentioned several recent cases which had given the AIA Council cause for concern, such as the partial demolition of a listed hydraulic tower in Liverpool Docks and a listed foundry wall in Hayle which had been hastily demolished because of an alleged danger to the public. It was pointed out that the Commission can, unfortunately, do very little about such cases after the event, though in the case of the Liverpool



example demolition had been stopped half-way through. Anyone making representations to the Commission in order to recommend a structure for listing was requested to spell out the significance of the structure to the Commission's staff in basic terms. DoE staff for example do not necessarily have detailed technical knowledge, and it is advisable in any submission to provide some background as well as a description of the structure and the activities that took place in it. Decisions regarding listing and consents for demolition can be made at various levels depending on the political sensitivity of the case in question. It is not unknown for the Minister himself to make the final decision in a politically sensitive area such as the London Docks.

The morning session was followed by a working lunch at which various other members of staff from Fortress House were present including: Peter Fowler, Secretary of Royal Commission on Historical Monuments (England); Nicholas Couper, Senior Investigator in the Threatened Buildings Section; Keith Falconer and Robin Thorns, Investigators in the Threatened Buildings Section; and Stephen Croad, Investigator in Charge of the National Monuments Record for England. Discussions centred on the kinds of records available at Fortress House, the services that the various departments provide and the ways in which amateur input can be of help to the professionals.

Dr Fowler outlined the history and function of the Royal Commission on Historical Monuments for England (this is quite separate from the Historic Buildings and Monuments Commission) and some of its component parts such as the National Monuments Record. He also pointed out the difficulties involved in making records, some of which were simply held for the purposes of administration and some of which were public in every sense of the word, available to those who wished to utilise them. As an example of the increased work load of the staff of Fortress House, Dr Fowler went into considerable detail about the Royal Commission's taking over of the Ordnance Survey's archaeological functions from 1983 onwards. This had meant a massive influx of information on cards, 150,000 of which should hopefully be transferred to computer by the end of July 1984. The Royal Commission has also recently taken on the Department of the Environment's collection of aerial photographs. These number over 2 million, some having been taken by the Royal Air Force in 1946-7 and others by the Ordnance Survey up to 1960. They are currently stored in an aircraft hangar in Acton but should be available to the public from Fortress House sometime in 1985.

The question of where local Industrial Archaeology Societies should send their records was asked and it was stated that these should be sent to the National Monuments Record at Fortress House. Either originals or copies can be deposited there. It was stated that approximately 150 organisations currently contribute to the National Monuments Record and there is **not enough industrial archaeological information supplied**. For many years the NMR has encouraged vernacular architecture groups to contribute and is now keen to move on to establish links with IA groups. As far as the format of information sent is concerned, it was pointed out that a full record is preferable to a non-intensive record such as an MDA card. The NMR are keen to have better structured information input, and it was suggested that they might at

some time in the future prepare a leaflet outlining what form of records are needed.

Keith Falconer spoke at some length on the shortcomings of the National Record for Industrial Monuments in the years that it had operated. This had been compiled using CBA cards, completed to a varying standard, was arranged by county but had been used very little. Copies of the record do survive in the National Monument Record Library at Fortress House.

Current thinking is that the detailed report submitted on A4 sheets of paper, accompanied by relevant drawings and photographs, is far preferable to any of the cards available. The report should be sent to the NMR who will copy whatever they consider suitable and return the original to the owner. Alternatives are to send details of where records are kept (if for instance a society wishes to deposit them with a local library or museum) or to inform the local Sites and Monuments Record who should, theoretically, feed the information through to Fortress House in the course of time. Regarding photographs sent in with reports, it was stated that black and white are preferred but obviously colour are acceptable if nothing else is available.

Following these discussions, the party toured Fortress House where they were able, amongst other things, to view the exhibition entitled 'Industrial Monuments and Sites: Prehistory to the Present', which the Royal Commission had mounted in the building (and which the AIA hopes might be available for the Aberystwyth Conference) and also see some of the Ordnance Survey archaeology cards being transferred onto computer. Some took the opportunity to visit the NMR library which AIA members may not realise is open to the general public from 10.00 am to 5.30 pm weekdays, with no appointment necessary, and is well worth a visit.

To conclude, it can be said that the meeting on May 1 could be seen as something of a breakthrough for the AIA. For too long the amateurs working in the field have viewed

Fortress House and its occupants with suspicion. However, it is apparent that those working inside and those working outside can be of mutual benefit to one another and should cooperate as much as possible. AIA members can play their part by sending relevant information to Fortress House, and by using the facilities by means of a personal visit. For those still baffled by the names, initials and functions, a comprehensive series of leaflets (see picture) is available on request.

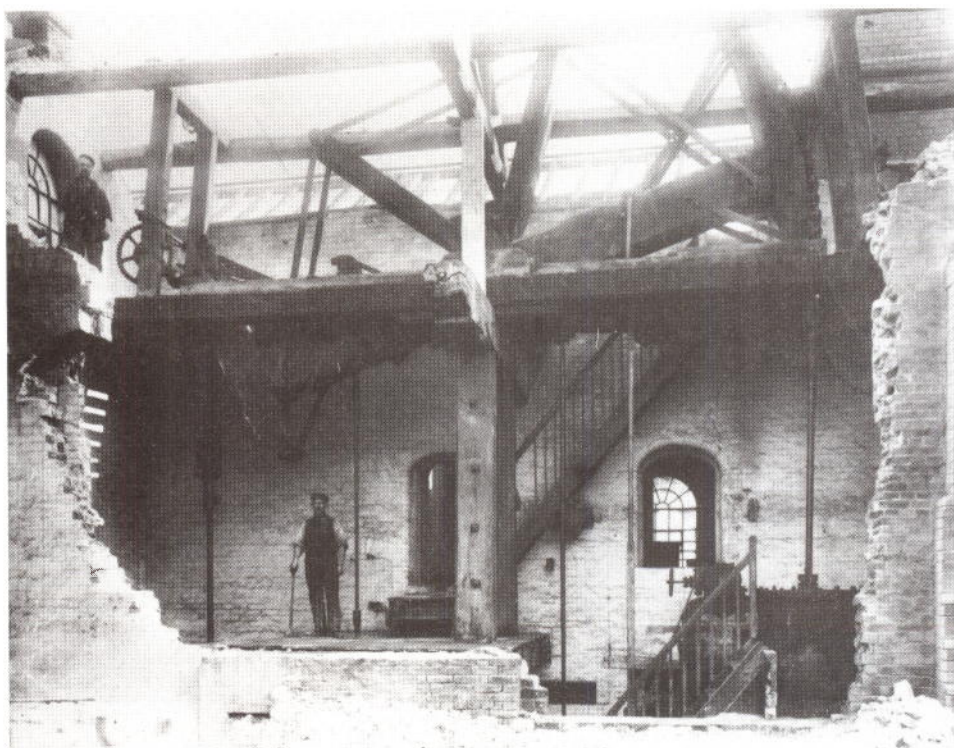
*John Powell*

**Smethwick Engine House.** The original site of the first Boulton and Watt Smethwick Engine, which is now housed in the Birmingham Museum of Science and Industry, has been excavated by museum staff. Financial assistance was provided by the West Midlands County Council Planning Department and archaeological assistance and advice given by the Sandwell Valley Archaeological Project.

The Smethwick (Spon Lane) Engine was built to pump water from the bottom of Smethwick locks (453') on the Birmingham Canal Navigation into the short summit level (491') that then existed. Pumping commenced in 1779. The summit was lowered in 1790 (to 473') and the number of locks reduced from six to three. A new delivery culvert was built to the lower summit. Pumping continued until 1892 when a new station at Brasshouse Lane came into operation. The Smethwick engine house was demolished in 1897 (Fig 1) but the machinery was saved and re-erected for preservation at the Ocker Hill depot of the Birmingham Canal Navigations Company. In 1960 British Waterways Board donated the engine to the Birmingham Museum of Science and Industry where it is now on public display and in steam on selected days.

The excavated remains of the engine house (Fig 2) are of considerable significance being probably the most complete example from the period immediately after the introduction of the separate condenser (James Watt's patent). Three

*Fig 1 The Smethwick Engine during demolition of the original house in 1897.*



features are of particular note:

- 1 The stone blocks which held down the steam cylinder complete with their elaborate buttressing and open cellarage.
- 2 The depth of the condenser pit which shows that the engine was operated in a normal configuration all its working life and only raised relative to the steam cylinder for preservation.
- 3 The entrance to the delivery culvert broken through the side wall of the engine house in 1790 and showing clear signs of a quickly executed modification.

British Waterways Board, who are the owners of the site, have now agreed that the site should be kept open in perpetuity. Details have yet to be finalised but the site will be managed as part of the Galton Valley Canal Park. In the future the public will be able to see the oldest working steam engine in the world at the Birmingham Museum of Science and Industry and the excavated remains of its original house only 3 miles away in Smethwick.

**Saving Cornish Crowns.** One does not need an informed interest in industrial or mining history to appreciate the ruined engine houses that are such a characteristic feature of the Cornish landscape. Constructed with stern simplicity to house and support the massive and highly efficient steam engines that pumped the deep shafts or wound ore and men from the depths, dozens of these evocative and monumental buildings have survived even in the most exposed and windswept locations. But it is easy to fall into the trap of taking their longevity for granted. Although the engine houses were built in most cases from the massive blocks of granite which could be readily quarried in the vicinity of the tin and copper lodes of the far Southwest, the mine captains who erected and

enlarged them were expected by the shareholders to eschew all extravagance and to exercise all thrift in spending money on capital development. The stone hewn to build them is supremely durable and will stand up to the driving Cornish rain for eternity. But we should remember that the heyday of Cornish mining was well past by the turn of the present century; a few tin mines soldiered on in Cornwall until the early 1920s, but with prices depressed by plentiful imports from Malaya and elsewhere, building and machinery had no more spent on them than the bare minimum; the Levant Mine disaster in 1919 came as a grim reminder of how maintenance budgets had been pared to the bone in the hope that the mine would survive to see a rise in the price of the ore and a return to prosperity. But when such a rise did come, it was too late to save most of the Cornish mines. Their machinery had been sold for scrap, their shafts steadily flooded and the roofs, windows and other 'ephemeral' parts of the mine buildings decayed or removed by acquisitive farmers for re-use on their farms.

The mine buildings that remain have thus in most cases had no maintenance for in excess of sixty years. Where lintels over windows and doors were made of wood, these have begun to fail. Brick chimneys have been quicker to decay than the engine house walls, with their squared granite blocks weighing several tons each, heavy enough to ensure that the reciprocating masses of machinery on which the mines depended for pumping and winding were anchored down adequately and that the heat provided by burning scarce and expensive coal was not lost to the chilling winds that frequently howled around the upland mining sites in winter. Uninformed military planners have claimed some of these noble structures for artillery practice, and deliberate vandalism is no more a stranger to rural Cornwall than it is to other isolated parts of Britain.

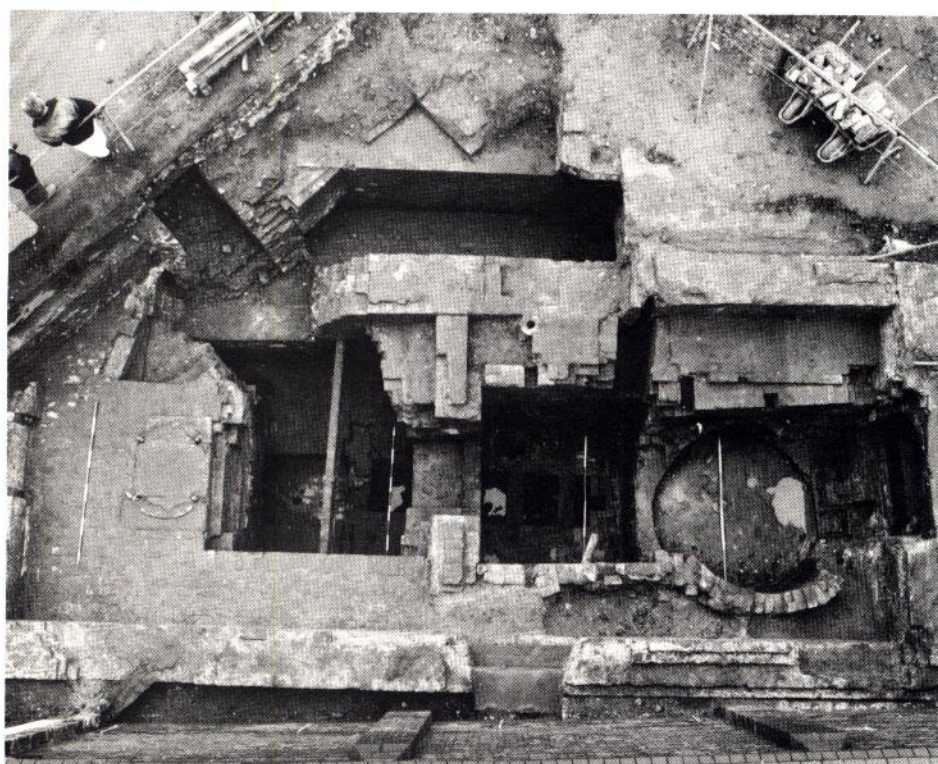
The best known of these ruined engine houses

must surely be those on the site of the Crowns Mine at Botallack, a few miles north of Lands End. With the grey Atlantic swirling around the cliffs below, this mine has always been a favourite with tourists and illustrators. King Edward VII and Queen Alexandra came here in 1865 as Prince and Princess of Wales to be lowered down the steeply inclined shaft which followed the vein of ore as it dived out under the sea. The buildings at Botallack have a complicated story to tell, and are probably the most photographed of any in the county. Disquiet has been expressed for some years that their exposed position makes these ruins especially vulnerable to collapse, and indeed the progressive failure of wooden lintels over windows and doorways, together with the destructive effect of water percolating down through the roofless walls, encouraging the growth of vegetation and washing out the mortar jointing, has accelerated the collapse of the walls in their upper parts. The two main gables have collapsed, as has the chimney of the lower engine house, unique in having been built within the main walls to save space on this very restricted site perched on the cliff edge.

Recently a proper measured survey of the condition of these buildings was carried out under the auspices of the Carn Brea Mining Society, a locally based society with a strong interest in Cornwall's mining history. Realising that the time had come for prompt action if these celebrated buildings were not to collapse beyond repair, the Society launched an appeal for funds to restore them. Principal targets of the appeal have been companies likely to be able to provide contributions in kind. With the site falling away steeply on three sides and access only possible down a rocky cliff path, it was realised that scaffolding would represent a significant proportion of the £40,000 estimated as needed to make the buildings safe and prevent further structural failure. English China Clays have promised to provide scaffolding services worth several thousand pounds and from the Department of the Environment will come a grant of 1/3 of the repair costs. A charitable trust has been established under the auspices of the Carn Brea Mining Society, which will be responsible for co-ordinating the building works, with a professional building firm providing specialist management. With an assurance having been given by the National Federation of Building Trades Employers that no objection will be raised to the use of MSC labour on this project, it is hoped that support from this quarter will further help to use to the best advantage the cash raised so far amounting to something over £12,000. A contribution of £594 has come from the South African Chamber of Mines as an acknowledgement of the outstanding contribution of Cornish miners to the South African mining industry.

The Trust has taken on a 21 year lease on the buildings from Lord Falmouth who owns them and other adjacent land. They have undertaken that all remedial work will match original materials and design, and will be confined to what is required to prevent further dilapidation and collapse. Some criticism having been voiced at the way in which the National Trust specified the restoration of another cliffside engine house at Rinsey Head on the South coast of the county, it is intended that the work to be done at Botallack will not 'tart up' these splendid and isolated buildings, nor provide them with inappropriate 'snails trail' pointing between the stones or otherwise obscure their essential

*Fig 2 Aerial view of the excavated remains of Smethwick engine house showing from left to right, the steam cylinder support, the valve gear pit, the condenser pit, the pumpshaft and finally the entrance to the 1790 delivery culvert.*





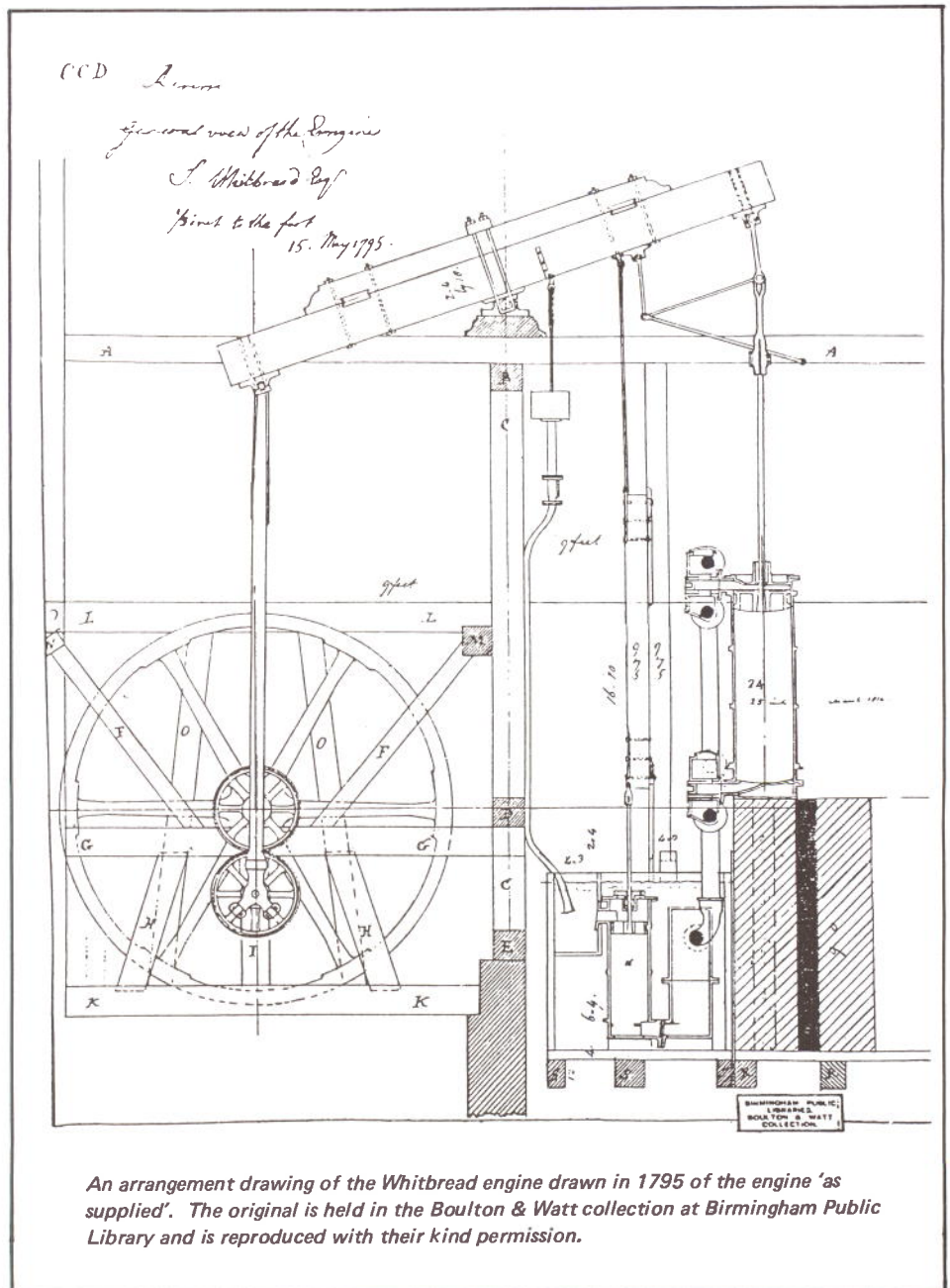
*Crowns' enginehouses, Botallack, June 1981. Boscawen Whim left, engine house right. Picture by Kenneth M Brown.*

features as historical documents. As well as being listed by the DoE, the Crowns engine houses (named for a nearby rock formation a few yards off the shore on which many mariners have foundered) are in an Area of Outstanding Natural Beauty, and part of a designated Heritage Coastline. The site can be readily reached on foot, being less than half a mile on foot from the B3306 road through Botallack Village, seven miles west of Penzance and five miles north of Lands End. Visitors will be welcome to watch the progress of repair work this summer. Contributions, however small, would be welcomed by Mr Lawrence Holmes, ARICS (Minerals) who surveyed the buildings in 1981 and has co-ordinated their rescue. His address is 'Whispers', Ladock, Truro, Cornwall TR24PL. An attractive commemorative postcard reproducing a 19th century print of the engine houses has been produced in support of the appeal. Copies of the card are available from Mr Holmes at 10p each plus postage.

**Bicentenary Beam Engine.** Two hundred years ago this year, James Watt designed a rotative beam engine for Samuel Whitbread's Chiswell Street brewery in London. This was two years after the erection of the Boulton and Watt first rotative engine at the Soho Foundry in 1782, and the Whitbread engine incorporated many of the innovations which eventually became accepted practice among engine builders; Watt's separate condenser, parallel motion and centrifugal governor, the double-acting cylinder and the elegant sun-and-planet motion by which Watt ingeniously circumvented the patent on the simple crank. A similar engine was installed at Albion Mills in London at about the same time but was destroyed in the great fire there in 1791 and another of 1786 worked for 90 years at Barclay Perkins Brewery in Southwark before being removed to the Royal Scottish Museum in Edinburgh. The engine at Chiswell Street attracted a great deal of attention on account of its magnificence (it stands 30 feet tall and weighs 32 tons) and reliability; three years after its installation King George IV and his Queen visited Samuel Whitbread's brewery to see this remarkable machine in action.

James Watt's engine went on to give 'stupendous service' at Chiswell Street, being modified and uprated ten years after its installation. With a new cruciform connecting rod and a cast iron beam weighing 9 tons in place of the original wooden one, the docile monster ran for 102 years. When the time came for replacement in 1887, it was offered to the Science Museum in London but was declined. To their eternal credit the brewery owners declined to send it for scrap; and by word of mouth, news of its availability became known to the Museum of Applied Arts and Sciences in Sydney, Australia. The engine was dismantled and shipped out as a gift, and for many years could be seen in a purpose-built engine house behind Sydney's Museum of Applied Arts and Sciences in Harris Street. But eventually the engine house was demolished to make way for extensions to the Sydney Technical College, and Boulton and Watt's magnificent machine went into store.

Recently the Museum has embarked on a major new expansion occupying a spacious site in Ultimo where one of the city's tramway depots formerly stood. The spacious tramway generating station adjacent, made redundant some years ago by the demise of trams in



*An arrangement drawing of the Whitbread engine drawn in 1795 of the engine 'as supplied'. The original is held in the Boulton & Watt collection at Birmingham Public Library and is reproduced with their kind permission.*

Sydney, will be developed progressively as an ambitious new Power House Museum. This scheme will make it possible for the Museum to bring out of limbo many important exhibits which have had to languish in store for many years, including a cable operated tram that first ran in Sydney 100 years ago. Another treasure, the first steam locomotive to run in New South Wales in 1855, is already displayed in a 'taster' exhibition which was opened some four years ago as the first phase of what will be a lively and comprehensive technology museum with international importance.

As well as providing a stupendous spectacle, the steaming of this 200 year old engine could provide unique experimental information on the thermodynamics and mechanical efficiency of these early Watt engines. In order to assist the Museum of Applied Arts and Sciences with this and other projects, a supporters' group known as the Technology Restoration Society has been founded; one of its initial targets is to raise £80,000 towards the restoration and recommissioning of the Boulton and Watt engine by 1986. Further details of this and other projects from Dr L G Sharp, Director, Museum of Applied Arts and Sciences, PO Box K 346, Haymarket, Sydney, NSW 2001, Australia.

**Contrasts in Railway Preservation.**

1 The preserved Maribo – Bandholm branch line on the Danish Island of Lolland. 0-6-0 tank locomotive No 2, built by Krauss of Munich in 1879 (works no 761) brings a train into Maribo station, where connections are made with trains to Nykoping on the main line from Copenhagen to Rodby.

2 The saga of railway preservation in Britain continues, sustained principally by the availability of steam locomotives from the scrapyards at Barry Docks in South Wales, many of which have been there since the early 1960s. The peak year for removals was 1981 when no less than 21 were taken away for restoration. Only one departed in 1982 but ten were sold in 1983, and reservations have been placed on most of 46 or so which remain. The photograph shows the unique 4-6-2 *Duke of Gloucester* built for express passenger service in 1954. The duties for which it was designed were soon taken over by diesels, and it was withdrawn in 1962. It was removed to a preserved railway at Loughborough in 1974 and restoration is now almost complete. The photograph shows it at Barry in 1969.

3 **Steamtown** near Bellows Falls, Vermont, contains the largest collection of steam locomotives in the United States. One of its outstanding exhibits is No 4012, one of the 'Big Boy' 4-8-8-4s, built for the Union Pacific Railroad in 1941 for the movement of heavy wartime trains through the Rockies.

**Wrought Iron Conference: September 1985.**

An international conference at Ironbridge on the subject of wrought-iron was suggested by the late Dick Deily of the United States Institute of Iron and Steel Studies, who unfortunately died in 1983. Plans for the conference are going ahead however, and it is hoped that the meeting will coincide with the first production of wrought iron from the puddling furnaces being built at the Blists Hill open air museum. The conference will be based at the Ironbridge Gorge Museum

with residential accommodation at the nearby Harper Adams Agricultural College. It will commence on Monday 9 September 1985, and conclude after breakfast on Friday 13 September. Themes will include the history of wrought-iron manufacture, the applications of wrought-iron, wrought-iron in the modern world, and a review of conserved sites and museums. Full details are available from Dr Barrie Trinder, Institute of Industrial Archaeology, Ironbridge Gorge Museum, Ironbridge, Telford, Shropshire TF8 7AW.

**Where and what are the mines of Aldstone Moor?**

I am attempting to trace a copy of a *Report on the roads and mines on the estates of Greenwich Hospital*, a folio-sized publication of 1823 by Edward H Locker. A copy is listed in the 1846 printed library catalogue of the Geological Society of London, although that body is not now able to trace the item or provide any further information about it, other than to suggest that perhaps it is somehow related to a report by Edward Hawke Locker, of the same date, entitled *Report on the mines of Aldstone Moore* listed in the 1881 printed catalogue. This item has yet to be traced also.

Are we on the track of chalk mines at Greenwich, or did the Hospital have estates and an

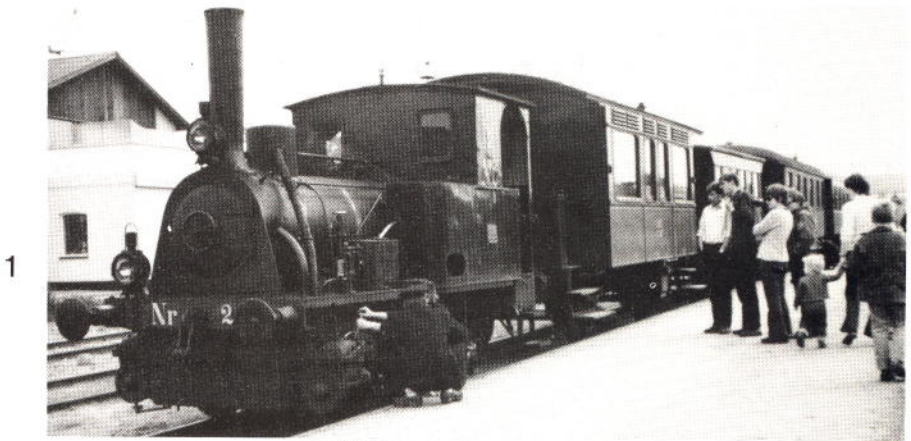
interest in mines in one of the metalliferous or coal mining areas? Where is Aldstone Moor? The Ordnance Survey *Gazetteer* does not list such a place.

*Paul W Sowan  
Subterranea Britannica*

**Duddingston Coalmines.** Probably the oldest recorded coal mining in what is now Edinburgh, took place in Duddingston parish in the areas known as Portobello and Joppa. A charter of Kelso Abbey dated 1466 records the right to dig coal pits, granted with the lands of Figgate, to Cuthbert Knightson.

The coals of Figgate (Portobello) now known to be those representatives of the Lime-stone Coal Group strata, are currently worked from Monktonhall Colliery. The coals come to the surface on a wide strip which runs inland in a NNE-SSW direction from the eastern end of Portobello through eastern Niddrie, through the southern edge of Gilmerton and on southwards through Loanhead to Penicuik. These coals were also known as the edge coals, due to their steep inclination.

The Joppa coals to the east of the Portobello coals are not so steeply dipping. These coals are now known as the Coal Measures coals. Records of the Joppa coals go back to 1538, when a



charter records the grant to Robert Barton of the right to coal and coal heughs in Easter and Wester Duddingston. The Joppa coals lie parallel to the Portobello coals and pass southwards through Newcraighall, southern Danderhall and on into Midlothian.

The published geological maps record a large number of shafts in the outcrop areas of the Portobello and Joppa coals. While there are written records of leases of shafts and of the erection and dismantling of engines there are no plan records to hand to determine where the coals were taken. We know, for example, that Lord Abercorn erected a powerful engine at Mount Pleasance which pumped water allowing mining to a depth of 52 fathoms (312 feet). We know that a breakthrough in to the old shallow workings allowed flooding that the engine could not cope with. Written records tell us that the Duddingston miners ventured under the sea in their quest for coal.

The poorer quality and small coal from Joppa and Portobello was probably used in the Joppa salt pans. Coal was certainly used by metal workers, as witness the 'Smiddy' or 'Smithy' coals, as well as for domestic purposes. It is likely that coal was used in the brickworks which sprung up in the Portobello and Joppa areas, where the coal and brickclay were readily to hand. Coal working in the northern portion of the Duddingston Parish appears to have closed down towards the end of 1790 and by 1865 the colliers' houses which remained were in a ruinous condition.

As with the coal industry, little remains of the brick industry in the area. None of the coal shafts or brickclay pits, or even the fireclay mine are visible in the Portobello and Joppa area today. Few residents or visitors would be aware of the hive of activity the area was in the past, in what is now a quiet residential part of Edinburgh.

***This article is reproduced from the Scottish Mining Museum Magazine.***

In October 1983, Professor Walter Minchinton and the Exeter IA Group ran a one-day conference on Limekilns at Dartington Hall, near Totnes. Around forty people took part and at the end of a satisfying day Walter offered to collect information from those who had contributed and publish the results.

This idea resulted in a 30 page pamphlet which is available from The Economic History Department, Amory Building, Rennes Drive, Exeter EX4 4RJ at 60p plus postage. In addition to précis of several of the talks, it contains six photographs, seven line drawings, four maps and a Limekiln Bibliography. In his brief introduction Professor Minchinton lists six salient points around which consideration of Limekiln IA could be based, and offers to arrange further meetings to follow up limekiln survey work now in progress.

There will be another Dartington IA Day on 6th October 1984 which will start at 10.30 am and end around 5.30 with three working sessions: coffee, lunch and tea and, presumably, the promise of a follow-up publication. If you enrol before 1st October the fee is £5.50 inclusive with a 50p fine for sending in a late entry. This year's subject is roads, including tollhouses, bridges and roadside furniture etc.

A recurring theme in philosophical discussions on IA is the relationship between social, economic and environmental history and the bits remaining

on the ground. In other words should the industrial archaeologist simply photograph, measure and record? Or should he also study in depth the contributory factors which have dovetailed together to produce the historical whole?

A quiescent but greatly revered chimney at Smithies Mill, Birstall (seven miles south-west of Leeds) is an example of this problem. As mill chimneys go it is a bit on the small side, and has on two occasions been reduced in height because of deterioration of the upper courses of brickwork. But what appears partway up the centre section is quite remarkable, and positively dated.



Smithies Mill was built from 1796 at the instigation of the Prince of Wales's Apothecary, Richard Walker who was apparently successful enough to be able to retire to his native Yorkshire, buy land and encourage the family cloth-making business. Through the marriage of his eldest sister Mercy, he became related to the Nusseys, who with the Claphams, another local family, had been connected with the scribbling and fulling trades for some considerable time. Walker persuaded the two families to form a partnership to operate Smithies Mill (the district is known as Birstall Smithies) and entered into a contract with Boulton and Watt for the supply of a 20 hp double-acting 'rotative' steam engine. From the time the mill became operative, in May 1797 until around 1864, the Nussey family were involved with several generations of the family having connections either financially or managerially.

There seems to be little doubt that 'the face on the chimney' is of one of the Nusseys, but apparently there is not yet concrete evidence as to which one. Local opinion favours John Nussey of White Lee (1786 — 1879) despite his photographs bearing no recognisable resemblance to the carving, but there is a strong case for considering Richard Nussey (1763 — 1835) or so says John Nussey to whom we are indebted for this brief account.

John has recently published a book on this subject, for which he obviously has a very special interest. Describing the building of Smithies Mill from contemporary sources, it includes a chapter on the Boulton and Watt engine, giving technical details, extracts from correspondence with Soho, sketches from the Boulton and Watt Collection (including an 'as installed' drawing) and an interesting account of Richard Walker's interest (in July 1796) in smoke-abatement.

There are also sections on Mill Management, Employees and Working Conditions and of course, the industrial archaeology. The original mill buildings, which John has identified by measurement as conforming with a drawing sent to Boulton and Watt in 1797, still exist within a complex belonging to 'Rest Assured Limited', furniture and bed manufacturers and situated between the A62 and A652 roads, NGR SE 225258. Unless there are radical changes at 'The Mill', these buildings (1796 — 1849) are likely to survive for many years and especially the proud and noble chimney from the heights of which the countenance of one of the early

partners keeps a watchful eye.

The book: ***Smithies Mill, Birstall. The life and times of an 18th century steam driven scribbling and fulling mill in the Yorkshire heavy woollen district***, can be obtained from John Nussey, 22 St George's Crescent, Queen's Park, Chester CH4 7AR at £2.95 plus postage, currently 21p second class.

**The Lewis Collection.** In November 1983 the Ironbridge Gorge Museum Trust took into its care the unique plateway collection of Dr Michael Lewis.

Dr Lewis lectures at the University of Hull and has undertaken extensive research into industrial archaeology. In 1970 his ***Early Wooden Railways*** was published (containing two chapters on Shropshire railways), now considered the standard work on this important subject. His interests range from Roman Temples to the North Wales slate industry, and in 1983 he delivered the Rolt Memorial Lecture at the Association for Industrial Archaeology conference in Lincoln.

The Lewis collection consists of over 200 items representing the most important types of cast and wrought-iron plate rail and chairs collected from locations all over the British Isles. Dr Lewis has carefully recorded the original provenance of all items, thus providing the typological as well as geographical distribution map.

This material is a unique source housed in one Museum for students of the subject. Those wishing to see the collection should write to the Curator of Social History at the Ironbridge Gorge Museum.

**City of Stoke-on-Trent Historic Buildings Survey.** The City Museum and Art Gallery at Bethesda

Street, Hanley, Stoke-on-Trent Staffordshire, took the opportunity of sponsoring an adult Community Programme Scheme, funded by the Manpower Services Commission and have used this opportunity to carry out detailed records of a representative sample of buildings standing within the present City boundary. This massive survey covers virtually every building built in Stoke-on-Trent prior to 1900 and their recent research report entitled 'Recording No 2 Brook Street, Stoke-on-Trent' shows the sort of information collected on each building. There are copies of the site survey cards, contemporary maps and documents and the detailed history of the house and its occupants. Finally there is a section of detailed architectural drawings which complete the picture. Copies of this survey can be obtained from the Stoke-on-Trent Historic Buildings Survey at the above address and should be of interest to anyone else involved in this form of work.

## Letters to the Editor

From: The Chairman, IA Sub-Committee,  
Cumberland Westmorland Antiquarian Society.

Dear Sir,

I read with interest the leading article in the Spring 1984 issue of the **Bulletin**. Although your reaction to the ill-informed **Guardian** item about Backbarrow and 'the Leven Valley' is understandable, your feature is open to comment. For example, the inference that the demolition of the Ultramarine Works chimney is in some way related to the reputation of the nearby cotton mill is a **non sequitur**.

The mill is now converted into an hotel, and members of our IA committee have monitored every stage of the conversion, discussing the operations with the firm concerned (Douglas Constructions) when they were in progress. It was unlikely that the firm would have wished for a redundant chimney opposite the hotel's rear entrance, although they have consented to display items of mill machinery on the hotel terrace, and are interested in using historical material on the cotton mill site.

There has been no debate about 'wretched symbols of industrial oppression' locally and the former chairman of the South Lakeland District Council is highly sceptical about this debate.

Your article may not succeed in encouraging site workers and IA enthusiasts who must occasionally have to deal with cases like Backbarrow. For example, how many groups go to considerable trouble to engage in discussion with converting firms, and how is this best done? How can groups be encouraged to obtain allies? Is this achieved by attacks on local authorities by the AIA? How can the AIA best influence events? And should it operate without reference to local groups? And should it learn something about local planning operations? The Lake District Special Planning Board and the Cumbria County Council have been concerned with Backbarrow. And should it give credit to local workers who record disappearing industries? An adult class student of the writer has recorded the ultramarine operations and plant, and this writer has tape-recorded a former manager of 'the blue works'.

The article was a lively and eloquent piece of journalism, but rather unfair.

*Yours sincerely,*  
**J D Marshall**

**Historic Farm Buildings Study.** I have been commissioned by the Council for British Archaeology to compile a Handbook on Historic Farm Buildings. This Handbook is intended primarily for the use of officials of the Ministry of Agriculture, Fisheries and Food but will also, it is hoped, be of use to research workers in this field and to advisers, planners, architects, conservationists and others concerned with Historic Farm Buildings.

'Historic Farm Buildings' are defined as any of the working buildings of the farm (such as barns, granaries, cattlehousing, stables or dovecotes) built before 1900, together with any related machinery and equipment. This does not, of course, imply that all such buildings are major historical monuments. But it does assume that all have some degree of historical interest.

This definition excludes dwelling houses and commercial watermills and windmills. It includes rooms in farmhouses once used as butter or cheese dairies and also farm mills driven by waterpower or, as occasionally happened, by windpower.

The Handbook will include:

A list of current research work, and

A list of organisations which do not normally undertake research but which (through, eg publishing the work of their members management responsibilities, or involvement in alternative uses for redundant farm buildings) have some specific interest in Historic Farm Buildings.

A full and comprehensive questionnaire for the compilation of both lists can be obtained from me.

I will be glad to send all contributors a copy of the final lists.

Your co-operation would be much appreciated.

Yours faithfully,

*Nigel Harvey*



**AIA Society Spot.** The Aberystwyth Conference is rapidly approaching, and a slot has been allocated for Affiliated Societies to meet for discussion at a more formal level than in and around the bar. Have you urged your secretaries or some other willing and interested victim to join us there? Remember, representatives and delegates from Affiliated Societies are very welcome, as well as your society officers. If you would like to investigate the Conference on behalf of your fellow membership, consult your committee and come with their backing to speak on behalf of **your** society.

In particular, come prepared with information to help the Council in its decisions: they are, after all, working on your behalf. I would appreciate information on whether your Society has been able to make any use of the **Lecturers' Panel** and the **Directory of Local Societies**; and we would like to be able, with your advice, to take a decision on the use of record cards. If local societies have been able to discuss this point, following the March conference, positive feedback on which system you think should be adopted would be welcome. I have already had some comment on this, but I feel sure more societies have opinions to express.

I shall be circulating a paper on publications at the Conference, as a result of information sent in reply to my request. My thanks to all those who have responded; there's still time to do so if you've not got round to it yet. But the response for the **British Humanities Index** has been disappointing so far, given the amount of research that is being undertaken around the country in IA. Don't let modesty stand in your way: if you do, someone else may think that your pet project is unfairly neglected and get in there first!

On a more serious note, it looks increasingly likely that the insurance scheme will die from lack of support. While Council would obviously regret this, since it is the only scheme specifically tailored for IA societies, we recognise that the decision lies with individual societies rather than the AIA; but it may be difficult in the future to negotiate another scheme should societies wish to resurrect it. Details for the brokers were in my last letter to secretaries, should your society take a last-minute decision to join.

The AIA is dabbling a cautious toe in the pool of commercial activity, so bring money as well to Aberystwyth (other than beer money, of course). We are producing AIA ties, and hope to have an experimental batch for sale at the Conference. Look out for them there.

This issue's **Profiles** feature two diverse societies and are almost the last of the material for Profiles that I have on file. We have so far covered fifteen affiliated societies since this feature began so there are about thirty still to present. If this is another on your society's growing list of good intentions, please bribe, cajole or otherwise persuade someone to produce something about your society. If not, the column will be in crisis by the next issue but one. (Profiles would make a good Christmas card substitute: the Post Office always urges you to post early.)

*Janet Spavold*

**The Crystal Palace Foundation.** Joseph Paxton's revolutionary design for the 1851 Great Exhibition was christened the Crystal Palace. This first truly international exhibition of art and industry was so popular that it was moved from its temporary site in Hyde Park to a hilltop in Sydenham.

The new larger Crystal Palace was the centre for entertainment and enlightenment for over 80 years. It featured exhibitions, music, courts depicting the development of art and industry, funfairs, fireworks, theatre, football cup finals, other sporting events and much more, all set in beautifully landscaped gardens and terraces with an unrivalled array of fountains.

All this came to an end on 30th November 1936 when the Crystal Palace was destroyed by fire.

The **Crystal Palace Foundation** is a voluntary organisation which is:

Undertaking restoration and conservation of the terraces, as part of a sympathetic improvement of the site:

Establishing a Crystal Palace museum:  
Promoting education and research, including publishing work concerned with the Crystal Palace:

Organizing exhibitions, talks and other events reflecting the importance of the Crystal Palace in our history.

The Foundation produces a magazine **Crystal Palace Matters** which keeps members up-to-date with progress on site and new plans. It also contains articles on the history of the Crystal

Palace, and recollections of it gathered from local people as part of the Oral History project. There is a section for school-age supporters, illustrative material and dates for the walkabouts and other events.

Further details from: The Membership Secretary, Crystal Palace Foundation, 84 Anerley Road, London SE19 2AH (01-650 8534).

**Leicestershire Industrial History Society** was founded in 1969 to encourage the study and recording of the country's industrial past and to broaden its members' interests by organising lectures and visits on all aspects of industrial archaeology. Monthly lecture meetings are held from October to April, and during the summer visits are organised in conjunction with its sister society in Nottinghamshire, including a weekend studying the IA of another region. LIHS is part of the East Midlands IAC group and has hosted several of its bi-annual conferences: EMIAC 29 in May 1985 is to be held at Coalville on the topic of the history and conservation of Moira Furnace, in which LIHS has played a major role over the past ten years. It is also organising the AIA Conference at Loughborough in 1986.

A particular feature of the Society is its Research Group, which meets regularly to undertake recording and research work. It has established good relations with the County Record Office, where meetings are often held, and with Leicestershire Museums and Leicestershire Libraries, for both of whom it has undertaken work for publication. The latter include a car trail to the Leicester and Swannington Railway; an illustrated gazetteer of the county's industrial sites; a facsimile, with commentary, of Prior's 1777 map of Leicestershire and a book on the Rural Industries of the county. The Group uses the Museums Documentation Association record cards for survey work and deposits these in Leicester Museum of Technology. For further information, please contact the Secretary, Dr Marilyn Palmer, 54 Chapel Street, Measham, Burton-on-Trent, Staffs DE12 7JD. Tel: 0530 71720.

**The Black Countryman.** The Spring issue of the quarterly magazine of the Black Country Society contains articles on the history of the button trade, an old glass house site and locos with Black Country links. There are also articles on visits of great engineers to the Black Country and the Woodside Ironworks. There is a great deal of Black Country interest in this publication and those interested in purchasing the publication should contact the editorial office at 1 Cedar Gardens, Enville Road, Kinver, Stourbridge DY7 6BW.

#### **Sussex Industrial Archaeology Society.**

Newsletter 42 of this active society discusses ice houses, the Brighton Chain Pier, Timberley viaduct and the Battle Abbey Estate Brickworks 1853-1901. There is also news of meetings, events and lectures together with good book reviews and further details of the society are obtainable from the Secretary, R G Martin, 42 Falmer Avenue, Saltdean, Brighton BN2 8FG.

**A Survey of Turret Clocks in the Salisbury Area** by the South Wiltshire Industrial Archaeology Society. An unusual area of study for an industrial archaeology group but appropriate for Wiltshire. This 16 page survey includes a map and list of the various clocks together with detailed descriptions. Details of the Society and this publication are available from the secretary,

Mrs J Jackson, Sandlwood, Portland Avenue, Salisbury, Wiltshire SP2 8BS.

**London's Industrial Archaeology.** GLIAS have just published the third volume in their series on London's Industrial Archaeology. The new volume consists of 54 pages and includes the following articles.

Hatcham Ironworks, New Cross.  
Southwark Bacon Drying Co.  
William Morris & Co at Merton Abbey.  
Edge Runners in Walworth.  
The Building of Canada Dock.  
Air Compressors in London's Docklands.  
Windmills in Greater London.

The price is £1.95 (plus 40p postage) and copies can be obtained from D Perrett, 33 St. Margarets Road, Brockley, London SE4 1YL.

**Dragonfly**, March 1984. The journal of the Wilts and Berks Canal Amenity Group discusses restoration of the Caine Branch, and the possibility of boating to Lacock and beyond. There are also details of a sponsored walk from Bristol to Reading promoted by Courage Brewery during which it is hoped to raise many hundreds of pounds for the Kennet and Avon Canal Trust. Further details of this Society from the Secretary, Neil Rumbol, 14 Chesnut Avenue, Buckhurst Hill, Essex IG9 6EW.

**Archaeological Report Number 6.** Compiled by Leicestershire Industrial History Society, it is edited by Marilyn Palmer, joint editor of the *Industrial Archaeology Review* and discusses several aspects of Leicestershire Industrial History. It concentrates on rural industries which include water, wind power and the agricultural processing industries and under manufacturing industries investigates textiles and hosiery, boots, shoes and elastic webb and engineering and ironfounding. There is a useful section on mines, quarries and building materials and finally transport discusses roads, rivers and canals and railways. There are 50 figures and two tables and a list of societies to join, places to visit and a bibliography. Altogether there are over 57 plates in the text and the Volume is obtainable from: Leicestershire Museums, Art Galleries Record Service, 96 New Walk, Leicester LE1 6TD and Leicestershire Industrial History Society.

#### **Windmills and Watermills Open to View,**

Mayling Hargreaves, Wind & Watermill section of the Society for the Protection of Ancient Buildings, 37 Spital Square, London E1 6DY, £1.60 + 25p p&p, 1984. A guide to over 200 mills in Britain now open to the public, including those once employed in such processes as the production of flour, wool and cotton textiles, paper and gunpowder. Many have been restored to working order and a number are once again producing traditional stoneground flour. Divided by county with some illustrations, grid references and times of opening.

**Aircraft Builders around Manchester,** A D George, Manchester Polytechnic Occasional Paper, Department of General Studies, John Dalton Building, Chester Street, Manchester M1 5GD. An abstract of the two year research project which David George intends to carry out to record something of the factories built prior to 1939 and to research their development. People

having further information about this subject should contact Mr George.

Another interesting piece from the *Surrey IHG Newsletter* concerns an intensive search to find a motor-coach manufactured by the firm of Dennis Brothers, Onslow Street, Guildford, who, according to *World's Automobiles 1880-1958*, began life in 1901.

**Vanishing Dennis Coaches.** Some time ago, when the SERIAC conference at Brighton was being discussed in Committee, it was suggested that, as the theme this year is transport, it would be a good idea for our party to arrive in an old bus made by Dennis of Guildford. We thought this was brilliant and offered to try to arrange it, but we could not possibly envisage the problems ahead.

First we approached John Dennis of Hestair Dennis and they do not have one – fire engines and veteran cars, but no buses. He only knew of one in West Bromwich which is not practical. Having seen Dennis buses in the Commercial sections of some of the rallies we have attended, we contacted various rally organisers and personal friends who own commercial vehicles, who in turn passed us on to others as they could not help. There is a 1939 coach in Runfold but it is awaiting restoration. Southampton University Engineering Society also has one but the round trip would be excessive for such an old vehicle in one day. We also contacted the Cobham Bus Museum and they don't have one.

We found one commercial coach operator with a DL type open charabanc – Glenton Tours of South London. This seemed our best chance. At last we had located one within reasonable driving distance but hopes were soon dashed. It can only be used for promotional purposes or charity runs as it is not fitted with a tachograph. If Glenton charter it out at all it must have one fitted and this presumably applies to all privately owned buses. A 1925 open-top double-decker was used in recent years for tours of London by a company called 'Obsolete Fleet' but as they are not answering their telephone we believe that they themselves have become obsolete – another victim of the tachograph perhaps? So we have to report complete failure on this one. Blame the Common Market!

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