

## Penetrating the Fortress

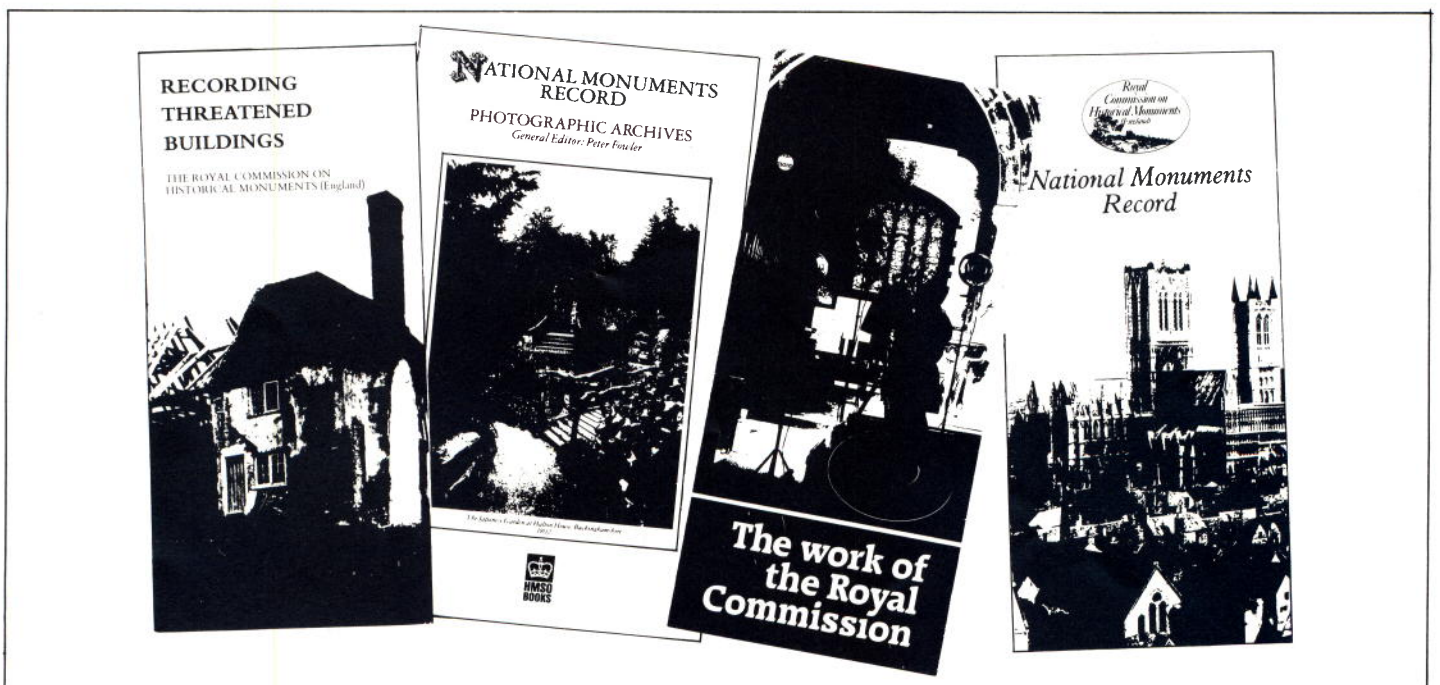
**Inside Fortress House.** On Tuesday 1 May a delegation of AIA Council members visited Fortress House in London, headquarters of the Historic Buildings and Monuments Commission for England, being invited as a result of requests by the Association to know more about how and why monuments are scheduled, 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.

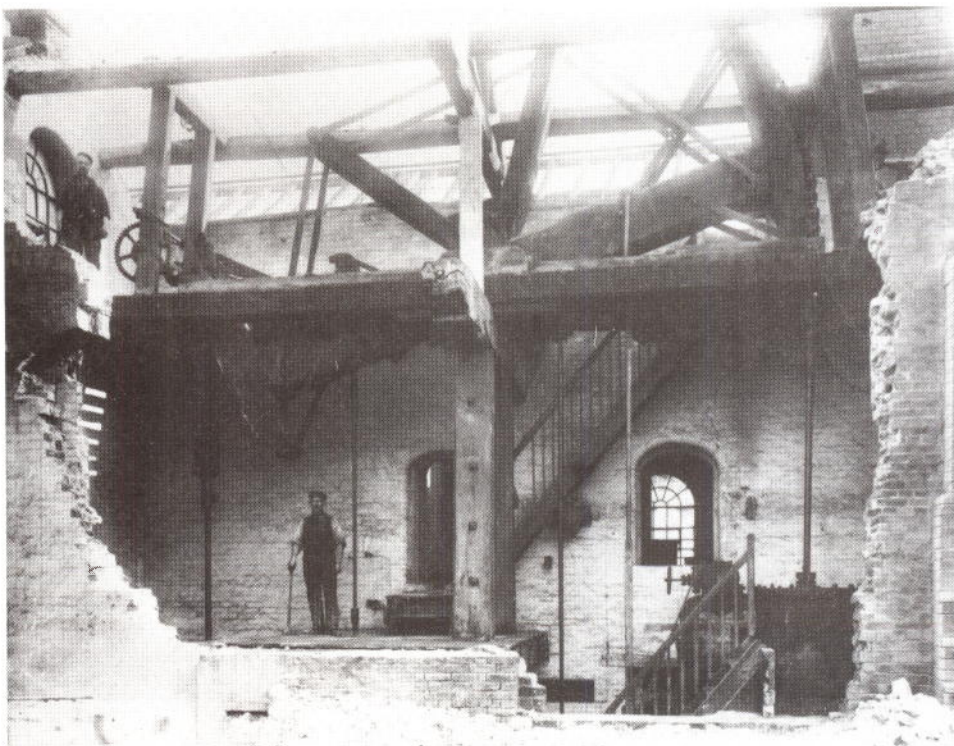
*John Powell*

**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.*

