

Medieval Lounge? A reconstruction of the mining remains dated to the mid 15th century at Lounge opencast, Leicestershire

- 1: Platform for winch to raise baskets of coal
- 2: Spoil heap produced by digging shaft
- 3: Shaft 100ft deep, 3ft square inside timbers
- 4: Timber-lined shafts with jointed oak frames and birsh branch shuttering
- 5: Tree rings in oak pit-props give dating evidence
- 6: Main coal seam up to 9ft thick. Mine galleries are 4-5ft high, leaving coal in roof and floor
- 7: Systematic pillar-and-stall workings partly back-filled with slack

Drawing by R F Hartley
Copyright: Leicestershire Museums

DIGGING DEEP IN MINING HISTORY

Stories have appeared in several national newspapers in recent months about the discovery of medieval coal workings at an opencast in Leicestershire. This find has important implications for British mining history, proving that sophisticated deep mining techniques were developed in England much earlier than was thought.

The investigators involved have provided for the AIA Bulletin the most detailed report on the site so far published, setting out their preliminary findings.

The biggest archaeological excavation in the world has just been undertaken in Leicestershire. What sounds like a gross exaggeration is probably quite true. During February 1991 staff of Leicestershire County Council's museums service were involved with an excavation of medieval mine working at British Coal's Lounge Opencast site near Coleorton. This investigated a rectangular timber-lined shaft with inside measurements ranging from 1.0m to 1.44m (39-56") by 1.36m to 1.57m (53-61") in a hole 1.29km square and about 100m (300') deep. Permission for the excavation was given by British Coal Opencast Executive, who provided valuable assistance throughout.

There are two British Coal opencasts in Leicestershire: Coalfield North near Heather, and Lounge near Coleorton. Museum staff had kept a watching brief through regular visits to both sites since their creation in the mid 1980s. They have exposed a variety of workings dating from the mid fifteenth century through to the 1940s. Over the past four years a large number of mining artifacts and workings have been found. These include underground sledges, tools, a complete 1930s coalface, a miner's woollen shirt probably dating from before 1800, an 1880s Evans Cornish steam pump, and a complete 1870s underground stable. But the most significant finds were a series of oak pit props.

These pit props average about 1.5m (5 feet) in length and are cut from the natural shape of a tree trunk. Their significance was recognised after the museum had a selection dated dendrochronologically. They were sent to Nottingham University, and findings based on matching the tree rings visible to statistics for mean growing seasons of oak over a long period have shown that the trees from which they were hewn were felled between 1450 and 1463. These are therefore the earliest

accurately dated coal mining finds in Britain and have blown-open our previous understanding of medieval mining.

Associated with the props were pillar and stall workings and a series of timber lined mine shafts all of the late fifteenth century. The patterns of working exposed and recorded were contrary to what was expected from the period. The shafts were 91cm (3 feet) square with timber frames set at vertical intervals of also about 3 feet. The frames were morticed and tenoned with an opposing 'Y' bracing. Major longitudinal timbers were cut into the wall of the shaft and packed with loose material to secure the frame. The shaft timbers were on average 10cm (4") square. Between the shaft walls and the frame was a double layer of brushwood and twigs, laid horizontally against the earth of the shaft wall and vertically between that and the frame. The shafts went to a depth of 27m (89 feet) and were distributed an average distance of 14m (45 feet) apart. Many shafts showed evidence of being back-filled and had no framing, possibly indicating that the frames were removed and re-used. At the bottom of the main pit investigated, the final shaft frame was resting on two 'L' shaped

Winding at a German mineshaft, from Agricola, *De Re Metalica*, 1556



pillars of coal with a roadway crossing the pit bottom. There were instances, however, of single exits from the pit bottoms. The pits led into an extensive series of pillar and stall workings extending over an area of about 2.59 kilometres square (1.6 miles). In some instances more coal was removed than the roof alone could support, which necessitated the use of the oak pit props.

The coal in these workings comprised of two seams, the Higher Main and the Upper Main, which at this depth had converged. The Higher Main which the miners struck first is 1.5m (5 feet) thick and is split into two equal leaves, the upper leaf being very poor quality coal. This was left to form the roof, with the bottom leaf of the Higher Main and most of the 1.2m (4 feet) thick Upper Main being worked. This resulted in coal workings about 1.5m (5 feet) high. Evidence of 'V' cut drainage channels was found in major roadways but as yet no drainage sump at pit bottom has been identified. All coalfaces were linked to main roadways which gave adequate ventilation and pit bottom were linked, giving an average working radius of about 6m (20 feet) from each shaft. There was also evidence of old faces and roads being backfilled with coal slack. Artifacts found in these workings included leather boots contemporary with the workings and three wooden shovels.

These workings bear no resemblance to the bell pits expected of the period. They were organised 'deep' mines with, one must assume, a division of labour between faceworkers, haulagemen, onsetters, banksmen, and shaftmen. What we do not know, however, is how the miners got down the shafts as no ladder securings on the shaft timbers have been found. Did they climb down the frame or were they hauled up and down on a rope? We also have little knowledge of how the pit tops were organised as these had been destroyed before any survey could be carried out. Agricola's *De Re Metallica*, published in 1556, shows German mines and shafts very similar to those excavated, with simple winding mechanisms over the shafts. However, the Leicestershire mines date from a century before Agricola, casting some doubt on the conventional assumption that European miners brought their techniques to Britain at about this time. As yet there are no clear answers. Much more research is needed into the organisation of these English medieval pits.

The excavation of one of the shafts was only made possible by the support and assistance of British Coal Opencast Executive and the coaling contractors, Budge Mining. For four weeks British Coal and Budge altered their work practices and extracted the coal around the shaft, thus allowing the Museum to carry out a controlled removal of seven frames. After careful recording and photography each frame

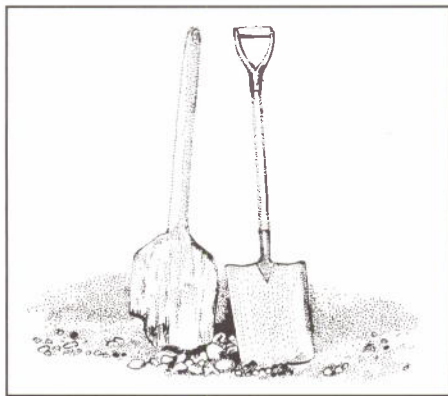
was lifted with the areas around and between the frames removed by 'backfill' bucket excavators. This was a nerve racking experience, to see an excavator working in a relatively delicate excavation, but our fears were soon laid to rest when we realised that, if challenged to do so, the drivers could probably have peeled a hard boiled egg with their buckets. Not only were they masters with their machines, the operation was only feasible in this, rather than by having to dig a hole nearly 25 feet deep by hand!

At each stage it became evident that the timber frames had been subjected to side thrusts of strata movement over the years which had caused many of the timbers to be forced out of position and even break. An interesting feature was discovered on our fourth frame to be exposed, about 24m (79 feet) below original ground level. At this point it was obvious that most of the frame had broken while in service and a simple but efficient shaft repair had been carried out, by fitting a new frame over the broken section.

As the timbers were removed they were taken to Snibston, Leicestershire County Council's new museum of science and industry at Coalville, where they were submerged in baths of water awaiting PEG treatment and eventual vacuum freeze drying. It is the Museum's aim to display about 6m (20 feet) of shaft in the new Snibston Museum when it opens next summer.

*Robert York and Stuart Warburton
Leicestershire Museums*

The authors would like to thank Mr P Blood, Site Manager of British Coal Lounge Opencast Site, and Mr T Hassell, Quarry Agent, Budge Mining for their assistance during the investigation.



Above: The old and the new: on the left a 15th century wooden shovel probably used for shovelling coal slack at the Lounge mine shaft

Below left: Lounge opencast mine workings; medieval pillar and stall workings about 45m NW of the excavated mine shaft. The large open area was worked during the 15th century and evidence of pit props could be found

Below centre: The medieval mine shaft during excavation with a medieval repair to the broken frame

Below right: Bob York working on the medieval mine shaft between layer 5 and 6

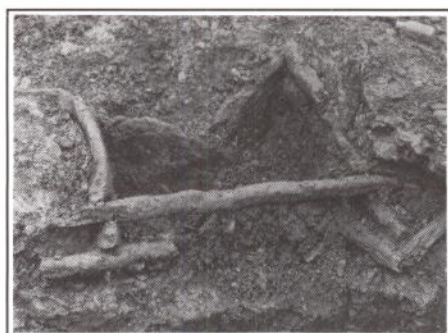
THE RISE AND FALL OF THE INDUSTRIAL CHIMNEY

Even remote hill farmers in Wales realise, from the eerie glow of their sheep, that the development of new technology can produce unpleasant side-effects. This was as true of steam power in the last century as it is of nuclear power today.

In the great extension of steam power which followed the expiry of James Watt's patents in 1800, tall, free-standing chimneys became widespread for the first time. Through the nineteenth century these grew in both size and number to become the most distinctive symbol of the industrial revolution, and a dramatic addition to the new industrial landscape. Writing in 1857, the chimney enthusiast Robert Rawlinson was worried about general standards of design and construction. In his *Designs for Tall Chimney Shafts* (1858) he wrote, 'A first vision of British chimneys as contemplated from our railways must, I fear, have caused many a nightmare to sensitive foreigners'. Sensitive locals had more cause for concern. One of the now forgotten aspects of industrial chimneys was their persistent tendency to fall down. Rawlinson went on to say: 'To be ugly is an evil, but chimneys are not only ugly, they are dangerous too.'

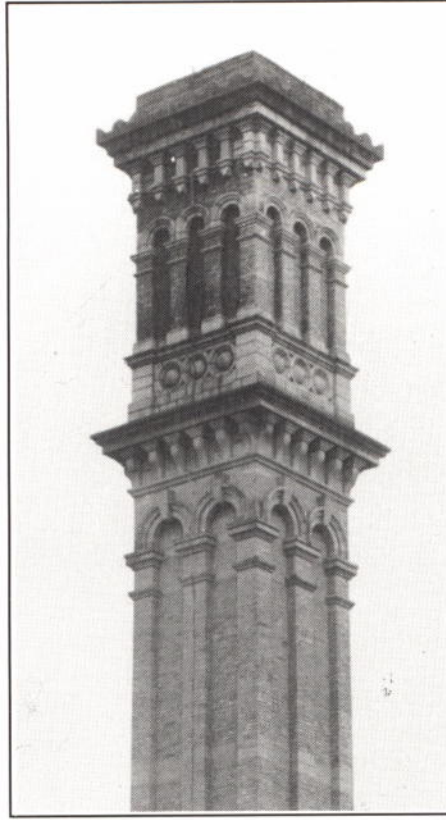
Much of this danger arose because of the generally miserable standards of nineteenth-century construction. We often tend to think today of such standards as very high, but we forget the huge proportion of poorly-made buildings which have been demolished or have fallen down. Victorian values did not usually extend to building materials, any more than they did to food, both of which were adulterated or reduced to the considerable detriment of the final product. Furthermore the men who built the chimneys were largely free to get the job done to self-imposed standards which related more to a chimney's drawing power than to its safety. Safety, as ever, tended to lag behind technical advance.

In 1800 chimney design had changed little in eighty years, since Newcomen's first steam engines. Engine houses were much like domestic dwellings, with the stack for the furnace rising a few feet above the pitch of the roof. In the succeeding decades chimneys rose steadily in height as increased demands were made on the steam-producing capacity of the boilers. They became emancipated, free-standing and self-supporting. To cope with the pressure of the wind, only the shorter stacks were made square, and anything over about 150 feet was made either octagonal or round in section. By the 1830s the tallest were over 200 feet, and by 1842 over 400 feet. In 1857 the new chimney at the St Rollox alkali plant near Glasgow became the world's fourth tallest building at a staggering 468 feet, and was as symbolic a structure to contemporaries as

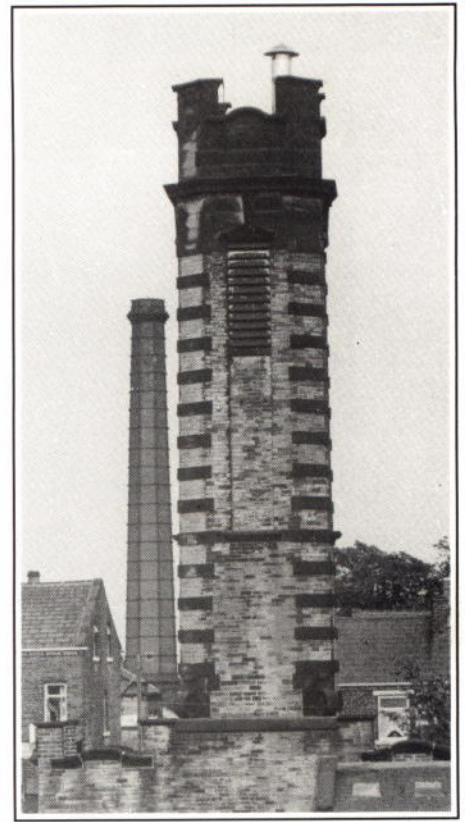




Dean Clough Chimney, Halifax, 1857



The massive stack of Manningham Mill, Bradford, 1873



School incinerator chimney, Wyke, Bradford

All photos: James Douet

sky-scrapers are in American cities today.

The chimney depended for its stability on the mass of brick or stonework in its walls. The lime mortar with which they were built was slow to achieve much cohesive strength, so stacks were particularly vulnerable when newly finished. Too much stiffness was eschewed anyway, in the false belief that a degree of flexibility was an asset. A propensity to oscillate, common to many chimneys, was therefore little warning of an impending fall.

Falls there were, and in great number. A bad storm might bring down several in one night. After violent gales in Sheffield in 1873, the citizens awoke to find at least nine of the city's chimneys stretched out on the ground. Following further falls that winter, the Times of London smugly concluded that 'life must be especially insecure in Sheffield.'

In the same year a 175 feet chimney fell in Northfleet, near Gravesend. It has been designed by James Cubitt and collapsed just as the topping-out ceremony was about to begin. Without warning, it suddenly bulged in the middle, bringing down the cast-iron coping and the three bricklayers on top.

The worst fall of all, in terms of loss of life, occurred at Newland's Mill, Bradford, in 1882. The 20 year old shaft had twice been straightened, by making cuts in the side to bring it back to the vertical. In the weeks preceding the disaster, the builders were called in again to correct a bulge developing in one side, which they set about cutting out. Despite the obvious danger, work carried on in the adjacent mill, so that when the 250 feet chimney duly fell, more than fifty people lost their lives. Characteristically, the inquest attached no blame, least of all to the owner, who had insisted the stack be built on the top of an old pit-shaft to economise of the expense of piling.

A further danger to which chimneys were exposed was that of lightning. Though poorly understood, great precautions were taken to

guard against 'the atrocities of the electric fluid'. Professor Faraday himself (he of the new £20 note) advised on a suitable conductor for the 300 feet chimney at the Edinburgh gas works in 1850. In one case, a bolt of lightning passed straight down the shaft, bursting open the brickwork, went out through a metal damper, through the boiler, and finally to earth through the stoker, who was standing patiently by the fire door.

Following the mid-century high in chimney construction, there was a move away from tall, sublime towers toward more decorative, picturesque designs, usually based on some historical analogy such as a campanile. This trend was in line with a more uncertain attitude toward industrialisation itself, and a desire to ameliorate its worst effects. New methods and materials, moreover, in conjunction with tighter building regulations, contributed to a much less haphazard approach to construction. Pre-formed concrete and steel chimneys gradually replaced the old hand-built stacks of brick and stone. Finally, the development of practical electrical supply meant the end of the pre-eminence of steam as the universal power source, and with it the heroic age of the chimney builder.

In the twentieth century the chimney is no longer the proof of work and prosperity it once was. It has wilted, like a sailor's tattoo, from a symbol of industrial masculinity to an embarrassing monument to decline and old age.

Most chimneys were demolished, as what were known as the 'smoke-stack industries' went into recession. Today, the value of the survivors is increasingly appreciated. Writing in 1979, in *Satanic Mills*, Marcus Binney of SAVE Britain's Heritage suggested that

chimneys were 'an essential element in the landscape' and gave the mill towns of the North 'an identity which is unmistakable'. A few examples around the country are cherished, like the ventilation furnace chimney for the Golden Valley coal pit in Bristol which was recently repaired and the steam engine stack at Westonzoyleland lately rebuilt (see *Bulletin* 16.2). Many around the country are now being listed or scheduled, but these are lone monuments to a once great enterprise. The difficulties of maintaining such structures, which always had their problems, are acute now that they have no industrial use. As more and more chimneys crumble and decay, the landscape of stacks and smoke has already passed.

James Douet

A book by James Douet on the history of the industrial chimney, entitled 'Going up in Smoke', is published by the Victorian Society and available from them at 1 Priory Gardens, Bedford Park, London, price £4.00 inc. P&P.

Drawing: Susan Isaac



POTENTIAL COUP ON COUNCIL

The Association's Annual General Meeting for 1991 will be held at its Conference, which this year will be at Dudley from 13 to 15 September. Papers for the AGM are enclosed with this mailing. Elections to Council will take place as usual, but an unprecedented *coup d'Association* is feared, owing to an exceptional number of nominations received in what appears to be a concerted effort to take over the Council. None of the candidates is known personally to anyone currently within the Association, although their names may be familiar.

The names so far received are: Mr C M Harber, Mr Stanley Mills, Mrs Elsie Carr and Miss Mag Piemine, along with Mr Ken Etanavon, Mr Glenn Garnock and Mr Albert Dock.

Other candidates who we are informed will be standing are Glyn Pits, Rhonda Valley, Ellis Mereport, Cliff Tonbridge, Don Navigation, Cole Brookdale, and Q Bridgingines.

Unprecedented overseas nominations are rumoured from two Americans, Chet M Dockyard and Conway Bridges, and one German, Herr Castel-Tunl.

Standing for President is Mr Harry Tage, with Dr R K Ology as Vice-President. Sir Gladstone Pottery has been nominated as an Honorary Vice-President and a Mr Fred Needlestreet is standing for Treasurer (with clerical assistance promised from his aged mother).

The wholesale replacement of the current AIA Council would be welcomed in some circles, and there is reason to believe that the hearts of many of the new nominees might be very close to their subject matter. However it is thought that as none of the nominees is likely to turn up in person at the AGM they will not receive a large share of the votes.

More personable members of the Association who would be willing to stand for Council or for particular offices are urged to consider the details about nomination enclosed with this *Bulletin*.

NEW MEMBERS OF AIA

The Association welcomes the following 11 new members, who have joined since 1 April:

P M Austin, Woking

Neil Beagrie, St Albans

David J Brine, St Albans

Richard J Butterfield, West Yorkshire

Mr and Mrs D Crowther, Derby

Norah Curry, Glasgow

David C Eve, Maidstone

Victoria Garrard, London

Keith George May, Ashton-in-Makerfield

Robert Zeeprat, Milton Keynes

In addition, the following organisations have affiliated to the Association or become institutional subscribers:

The Literary and Philosophical Society, Newcastle upon Tyne

Newcastle upon Tyne City Council

Instituto Di Disegno, Italy

Joan Mercador History Department, CECl, Spain

Queen Victoria Museum and Art Gallery, Australia

Swets Subscription Service, Holland

Cambridge Society for Industrial Archaeology

AIA IRONBRIDGE WEEKEND 1991

The annual weekend at Ironbridge for AIA Affiliated Society representatives (and others who wish to attend) was held in April. The 1991 weekend was, once again, well supported, with about 50 participants. More than usual came on the Friday evening, and our pleasant visit to the Meadow pub was very cosy as a result.

The formal programme began on Saturday morning, and the theme for this year was 'Local Societies and Conservation'. We started with three case studies—Ian Mitchell talked about the Derbyshire Archaeological Society IA Section's work at Morley Park blast furnace; Barrie Funnell of the Norfolk IA Society about the restoration of Gunton Sawmill; and Edwin Course about Twyford Waterworks pumping station in Hampshire. This was followed by a lecture by Adrian Pearce on safety on sites, a most useful and important topic.

After coffee, the IA Video Recording Group gave a fascinating presentation on the use of this medium for recording, illustrating how appropriate it can be, especially when processes likely to cease are involved. The morning concluded with Brian Malaws of the Royal Commission on Ancient Monuments in Wales giving an introductory lecture for the afternoon's practical session on the recording of machinery. After lunch, AIA Council met and the rest of the delegates were able either to use the Passport tickets kindly provided by the Ironbridge Gorge Museum to its sites, or to join the practical session led by Kate Clark of the Museum and Brian Malaws. This centred on the woodworking shop at Blists Hill, where ways in which one might undertake basic recording of machinery were considered. In the evening, all gathered for the traditional dinner at the New Inn, Blists Hill, and for a light-hearted quiz to follow it.

Sunday's proceedings began with a session on how local societies might assist their county Sites and Monuments Record Officers, given by John Crompton and Hilary White (the SMR Officer for Hereford and Worcester). This was truly memorable, with John posing as a 'typical industrial archaeologist' (how others see us!!) trying to 'help' Hilary. I think we all learned a lot from this session, making it very useful indeed, as well as highly amusing.

The second session was on awards for conservation and recording, and Stephen Hughes and John Crompton drew attention to available schemes, in particular the AIA Recording Award and the Dorothea Award for conservation (have you or your society yet considered submitting an entry for either of these?).

After coffee Marilyn Palmer reported on the progress made in the formation and consolidation of the CBA Regional IA Panels, and the final two contributions of the weekend provided contrasting viewpoints: Peter White of English Heritage spoke about 'the case for preservation *in situ*', whilst Stuart Warburton of Leicestershire Museums gave 'the case for museum preservation'. A buffet lunch brought the proceedings to their conclusion.

Suggestions for the programme of next year's Ironbridge Weekend, which will be held on 3-5 April 1992, and any other comments concerning AIA's service to its Affiliated Societies, should be sent to me at 20 Stourvale Gardens, Chandlers Ford, Hampshire SO5 3NE.

Pam Moore

SUSSEX SURVEY

Following the news in the last *Bulletin* of the award to Sussex IA Society of a grant from the Leverhulme Trust to fund a two-year survey of the county, a field recorder has now been appointed to undertake the work. The Recorder's job will be to survey and record visible remains of industrial archaeology in East and West Sussex in order to create a body of knowledge available to scholars and planners. By the time the survey has examined every parish it is estimated that it will consist of up to 10,000 completed survey sheets, each with photographs. The record sheets will be compiled by the Recorder working in co-operation with local amenity societies and interested bodies.

Mr Don Cox of Partridge Green has been appointed Research Recorder. He has lived in Sussex all his life and has experience as an engineer for a broad range of companies on both the practical side and on the 'white collar' side as a draughtsman and project and sales engineer. Don joined the Sussex IA Society in 1970 and has been actively involved in industrial archaeology through teaching adult education classes, writing articles and books, and serving as the Visits Organiser of the SIAS and Secretary of the Sussex Mills Group. He will be contacting local history societies, Women's Institutes and others interested in the history of their areas. It is hoped that the generous provision of funding by the Leverhulme Trust and the appointment of a highly proficient Recorder will ensure for the first time that the industrial heritage of Sussex will be competently catalogued.

WINDING ENGINE UNDER THREAT

North East Derbyshire District Council is about to redevelop the site of the former Westthorpe Colliery at Killamarsh, near Sheffield. Sunk between 1924 and 1926 with a single 120 yard shaft the pit worked until 1986 when British Coal removed the headstocks and filled the shaft. A survivor of this closure is a 1924 Robey and Co of Lincoln steam winding engine, used continuously until the pit's closure. The engine has two 22" internal diameter cylinders (working at 150 psi) with drop valves and a 40" stroke. There have been a few modifications and alterations over the years, including new fly cranks, a new piston, a new crosshead and replacement reversing gear. The most significant alteration was the replacement of the original brake mechanism with a modern hydraulic one. The engine, however, is in excellent condition and has been regularly maintained by a group of volunteers who last steamed it in 1989. A significant feature is the engine's rare bi-cylindro-conical drum which was employed to save steam by reducing the torque when raising full cages. The drum is 12 feet diameter and by far the heaviest component.

During the redevelopment of the site the engine is likely to have to be removed and the Council is currently considering the options for its future.

The Council would like to hear from any persons or organisation that could assist with the preservation and accommodation of the engine. Please contact John Bentley on 0246 231111 extension 2448 or write to the Director of Planning, North East Derbyshire District Council, Council House, Saltergate, Chesterfield, Derbyshire S42 7EB.

SMALLSMITH'S DIARY

10 May

Today for the first time we saw our new Buttockbarn IA Group marble-effect writing paper, as designed by Neill. Bolt was still unhappy about this, not least because Neill had also replaced the Group's old logo (a dumpy level through a narrow boat, drawn in the early days by Bolt and Mrs Dobbin), with a new one. I must admit I like Neill's effort. It is an abstract design like the new British Telecom logo (Sorry, now 'BT!'), which side-steps the grime and toil of our work—which frankly must put off many a faint-hearted potential recruit—and yet 'effortlessly evokes the spirit of Buttockbarn's proud industrial heritage and our endeavours to record it' (as Neill put it himself).

17 May

Our first chance to use our new paper! It was felt we should write a letter voicing our disquiet to the particular county council which is selling off its art to combat poll tax capping. Some felt it was not a real threat to our discipline. There is, after all, a more lucrative market for a painting than for a brick kiln or a stationary steam engine. But is it that far removed from the larger industrial museums which collect beyond their means and then, say, use their mangles to feed their foundry, or their chaldron waggons as a basis for landscaping; or museums which plan to build bijou house developments on corners of their sites? At this the remarkable Mrs Dobbin, who is no fan of the namby-pamby professionals who run museums, got very angry and was all for using up total stocks of our new paper in a crusade against such people.

Oddly, Bolt, who is no lover of these 'so-called professionals' (and especially those who might sell off artifacts) kept quiet. And Neil did not jump to their defence. Indeed they both looked very awkward when someone asked how the finds from our celebrated 1988 dig at the blast furnace were stored. Could it be that the answer lies in the hardcore of the new drive to Bolt's lock cottage, which the two of them built the following spring?

21 July

What a jolly evening, a fancy dress party with an industrial archaeological theme at Bolt's lock. My dear wife looked very fetching as an east coast fishwife, and I looked the part as a navvie. Neill typically had to go one better, wearing a genuine Victorian suit and silk top hat and carrying a roll of original plans of the Embankment which he borrowed from work, in the role of the great sewer engineer Bazalgette. Bolt was wearing a strange and not perfectly finished contraption of his own design on his head. When asked what it was, he would solemnly pull one of the many strings that hung around him, and claim it was a working model of the Barton Swing Aqueduct. As it was, he spent most of the party cursing in a corner trying to unknot the strings, and finally smashed the 'model' on a low door as he stumped off in a temper to get some more beer. The prize went to Mrs D. who came as a larger-than-life George Hudson, the Railway King. Neill, who took his second place with some ill grace, was heard to say that she could have turned up in her normal attire and won the prize as Nasmyth's steam hammer... or a flying boat crash landing.... But it was a good night in spite of this.

THE AIA NEEDS YOU

The AIA is at present run totally by volunteers, the great majority of whom have paid jobs which require at least some of their attention.

As the Association increases its activities, this means ever greater burdens are being placed on Council and especially the officers and we would therefore welcome offers of help from members willing to undertake some of the routine tasks. This would not necessarily mean standing for Council, though co-option onto

one of the committees might be a good idea.

In particular we have urgent need of:

- 1: a Merchandising Officer, to handle the ordering and sales of items like AIA ties (a number of people have said they would like ties to be available again);
- 2: an Assistant Treasurer to handle covenants;
- 3: assistance with publicity, especially from anyone with contacts and knowledge of the media;
- 4: someone with a suitably large car or other

vehicle and some storage space willing to look after the AIA portable displays, and make arrangements for it to reach the venues where it is needed.

These are only for starters: with more assistance we could contemplate arranging more services and activities. If you can help, please contact me at 48, Quay Street, Halesworth, Suffolk, IP19 8EY, or ☎ 0986 872343.

Go on! prove the doubters wrong, swamp me with offers!
David Alderton, President

NOTICEBOARD

GLASSHOUSES

David Crossley, one of Britain's most eminent practitioners of practical archaeology in the post-medieval and industrial periods, is collecting information about sites of glass making. He has obtained a grant from the Leverhulme Trust to update records of English glass furnace sites. Although well-acquainted with published work on the glasshouses of England, he would be pleased to hear of new sites or new sources of evidence that have come to light. He can be contacted at Centre for Extension Studies, Division of Continuing Education, University of Sheffield, Sheffield S10 2TN.

GEORGE WATKINS COLLECTION

Users and potential users of the George Watkins Collection of photographs of stationary steam engines are notified that access arrangements to the collection have changed. It is held at the Royal Commission on the Historical Monuments of England, Salisbury office. Due to reorganisation, personal visits to the Collection can no longer be accommodated. However the voluntary cataloguing of the Collection by members of the Stationary Engines Research Group is proceeding well and most of George Watkins' field notes and contact prints have now been photocopied. It should therefore become increasingly possible

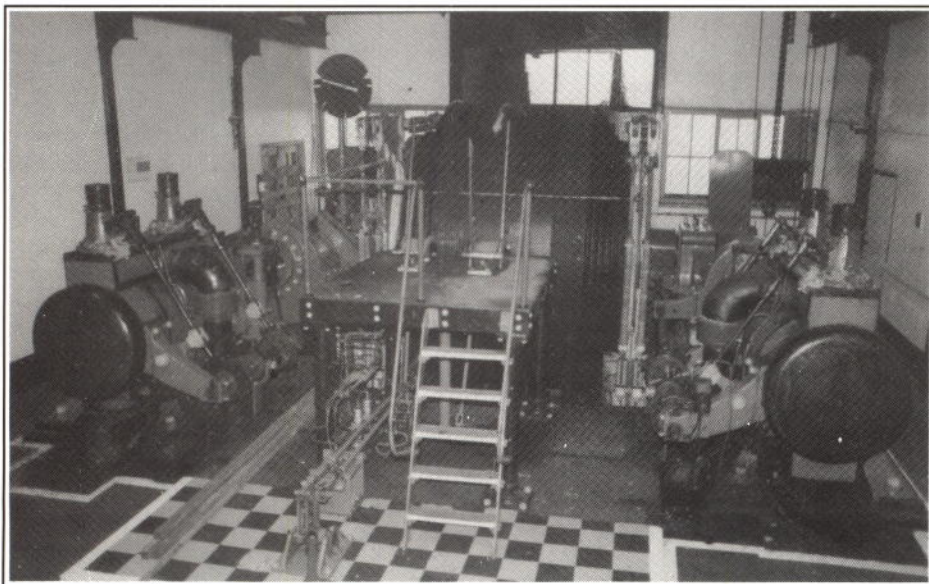
to answer adequately written enquiries, staff resources permitting. Enquiries should be sent to Keith Falconer, Royal Commission on the Historical Monuments of England, Rougemont, Rougemont Close, Salisbury, SP1 1LY.

GLIAS SALES

The Bulletin has been asked to relay the information that, for the time being, outstanding book orders and queries regarding publications by the Greater London IA Society should be addressed to Dr David Perrett, 33 St Margaret's Road, Brockley, London SE4 1YL.

CENTRE FOR CONSERVATION OF BUILT ENVIRONMENT

The Hampshire Buildings Preservation Trust has purchased part of the former Bursledon Brickworks site near Southampton, and an exciting project, the creation of the Centre for the Conservation of the Built Environment, has been launched. Items are being collected for display and a wide range of artifacts relating to the history of construction are sought. These can be small items, such as unusual bricks or tiles, or early scaffold poles, period windows, brick making machinery, or anything to do with the creation of the built environment. If you can help or would like more details, please contact either the Project Manager, Kevin Stubbs, Historic Buildings Bureau, Hampshire County Council, The Castle, Winchester SO23 8UE ☎ 0962 841841; or Miss Diane Walker, Education Officer, Hampshire Buildings Preservation Trust, Centre for the Conservation of the Built Environment, Bursledon Brickworks, Coalpark Lane, Swanwick, Southampton SO3 7DL.



Westthorpe Colliery engine, see *Winding Engine under threat*, opposite
Photo: Stuart Warburton

REGIONAL NEWS

GREATER LONDON

Of late, visitors to the vicinity of **Canary Wharf** mutter 'Ceausescu' when confronted with the rapidly growing collection of new buildings, unashamedly exhibiting an architecture of naked power of the kind we used to associate with Joseph Stalin and his like. The view from the north west along West India Dock Road is now dominated by the Canary Wharf development to such an extent that the formerly impressive Grade I listed warehouses by **George Gwilt** on the North Quay of William Jessop's Import Dock are dwarfed absurdly by the 'fun', throwaway classical architecture towering behind. There are at present no signs of conversion works starting on the Gwilt Warehouses. Perhaps one should remember that Stalin (as Joseph Vissarionovich Djughashvili) once lived in Whitechapel and that according to George Bernard Shaw, Russian Communism was an export from England. The **Salvation Army hostel** in Fieldgate Street where Stalin stayed is still there.

At **Tobacco Dock** and **Butlers Wharf** things are not going too well financially. Much retail accommodation remains to be let at Tobacco Dock and traders already there do not seem to have a great deal of business. Unlike Wandsworth the hoped-for 'yuppification' of Docklands has apparently not taken place. Successful young business people who have bought flats in the area spend their weekends in the country and are just not around at leisure periods to support the relatively expensive new facilities being provided, while old haunts frequented by the indigenous population are crowded. One of the pirate dummies, part of the '**Pirate Experience**', was reported stolen from an imitation pirate ship to the South of the Tobacco Dock building.

A battle is raging over the retention of the elegant Telford period retractable footbridge spanning the passage from the entrance basin to the East Dock at the **St Katharine Docks**. There are problems owing to greatly increased public use but the conservationists believe an engineering solution is possible. The party desiring demolition have described the bridge

as 'effete'.

Hay's Galleria, around the site of **Hay's Dock** to the North of Tooley Street, is near London Bridge railway station and relatively close to the City. It seems to be attracting somewhat more leisure custom than Tobacco Dock. The late 1980s **Horniman at Hay's** public house serves pots of Horniman tea at a price much more reasonable than beer (to an extent that makes Temperance attractive). Apart from the tea room at the **Horniman Museum**, Forest Hill, this is the only place at which this once popular tea can be bought. Around the bar at Hay's is an interesting frieze depicting the World in the mid Victorian period. Hay's Dock itself, dating from the mid 1850s, whilst still essentially intact and capable of reinstatement, was dewatered and converted into a multi-storey underground car park in the 1980s.

Primrose Hill railway station is threatened with closure despite a campaign by the Heath and Old Hampstead Society and the Green Party to retain a service. There is now merely one train a day in each direction, just allowing local residents to commute to the City. Only in 1986 considerable civil engineering works at **Graham Road** were nearing completion to divert the then train service to Broad Street into Liverpool Street station (see *Bulletin* 15.2). The new line from Navarine Curve Junction, which joins the former Great Eastern Railway Cambridge line north of London Fields in order to allow Watford trains to run into Liverpool Street, is now scarcely used. What a waste of money it appears to have been.

The 16 **Whitbread Brewery** shire horses presently residing in stables at Garrett Street EC1 will shortly be moving to the Whitbread hop farm at **Paddock Wood**. Shires have been stabled at Garrett Street since 1897 when they were moved out of the main brewery buildings in **Chiswell Street**, but regular horse-drawn deliveries ceased in 1988 and since then horses have only been used for special occasions. Ninety years ago Whitbread's employed more than 300 dray horses delivering beer in the City. The brewery in Chiswell Street, which Samuel Whitbread moved to in 1750,

ceased brewing in 1970 but a number of notable buildings survive and by special arrangement one may still see the Sugar Room of 1782, the Smeaton Vaults and the great Porter Tun Room with its 65 feet span triple king post roof trusses. King George III and Queen Charlotte visited Chiswell Street in 1787 and saw the James Watt beam engine. To see the shire horses at Paddock Wood telephone 0622 872068.

R J M Carr

NORTH-WEST ENGLAND

The Civic Trust in the North West has been commissioned by North West Water to carry out a feasibility study for the re-use of **Scarth Hill Pumping Station** in Ormskirk: a complete example of a 1930s pumping station with diesel engines, a 1960s water-tower and many artifacts. The viability of a Heritage Visitor Centre will be one of the principal new uses examined.

The Grade II Listed **Beehive Mill**, Jersey Street, Ancoats, of which parts date from the early 1800s and which has a ribbed cast iron roof truss, is the subject of a £1.5 million refurbishment scheme grant. Aided by the Department of the Environment and financed by London owners, the plan is to convert the building into rehearsal rooms, recording studios and a concert hall for Manchester's many pop bands. The essential structure with its cast-iron columns and stone staircases will remain.

Plans to offer the 1890s **Hydraulic Pump House** in Bridge Street, Manchester to developers for museum or leisure purposes have been thwarted by a Department of Education and Science order that the assets of the College of Arts and Technology should be frozen pending its transfer to central funding and control from the local authority. The building is used as workshops by construction students. It is the sole remaining pump house of the Manchester Hydraulic Power System, which supplied power through mains to the many lifts and hoists in Manchester warehouses. A set of pumping equipment was recovered for preservation at Salford University Civil Engineering Department some years ago.

At **Wigan Pier** the story of the Leeds and Liverpool Canal is told by means of interpretation boards but these are situated at the far end of the basin, so easily missed. The first building encountered built over the basin is the stone terminal warehouse of 1771 with two shipping holes. The other two remaining warehouses are relatively late and have obvious railway architectural features such as blue brick window heads, boarded-in hoists, and canopies. The major attraction of Wigan Pier for the industrial archaeologist is that part of **Trencherfield Mill** (1907) is open to the public and has demonstrations of cotton preparation and spinning machinery on Platt machines, including ring frames and doubling frames in a mill floor environment. The triple expansion mill engine by J and E Woods of Bolton is steamed regularly. The drum still drives ropes and pulleys in the race.

It is expected that the line of the **East Lancashire Railway** from Ramsbottom to Rawtenstall will open this year. The line opened in 1846 and linked Manchester to Bolton and Bury via Radcliffe, then continued along the

The Tobacco Warehouse in the early 1840s (see Greater London News), with men opening the tobacco hogsheads and hacking apart the compressed blocks of leaves. The building is now called Tobacco Dock and is listed Grade I.



Irwell Valley through the village of Summerseat and the market town of Ramsbottom before reaching Rawtenstall. The line last carried British Rail passengers in 1972 and was used by coal trains until 1980. The East Lancashire Railway Preservation Society with the assistance of local councils partly re-opened the line in 1987. Work is in hand to provide more traditional station buildings and improve passenger facilities. Close to Bury's Bolton Street terminus is the **Castlecroft railway warehouse**, which acts as a workshop and houses a range of historic vehicles and engines. At holiday times there is a connecting bus service from Ramsbottom station where the original station buildings on the up platform, now refurbished, provide facilities for passengers to the Lancashire Textile Museum at **Helmshore**, to which has been added a working mill room. Near Summerseat is the fine stone-built **Hoyle's Mill** of 1873, recently converted to apartments, and at the Rawtenstall terminus the large three-bay **East Lancashire Railway goods shed** survives as a car showroom. This has an impressive wooden roof truss supported on iron columns. Adjacent, a four-storey warehouse with two loading slots and a central wagon entrance is also under restoration.

A D George

YORKSHIRE AND HUMBERSIDE

In the nineteenth century **Sheffield** produced enormous quantities of engineers' files. They were much more widely used than today, since machine tools were less versatile and the skills of the fitter were essential. The files were made from the city's high quality crucible steel, by numerous small 'steel and file' manufacturers. Some of these, notably Firths, developed into major steel firms. The teeth of the files were cut by hand until machine cutting was introduced by the main producers in the 1870s and '80s. In this century output has gradually fallen, and the trade is now extinct since **Ralstons**, believed to be the last British makers of engineers' files, ceased production in May. They were set up in 1915 and are still run by the sons of the founder. They were among the last manufacturing firms in the city centre, in premises which included old cutlery workshops,

back-to-back houses, roofed-over yards, and even a former pub.

Priory Mill at Monk Bretton, Barnsley, a monastic watermill which remained in use until 1926, has been converted into a public house by architect Malcolm Lister.

Redevelopment along the **River Calder** and the Calder and Hebble Navigation (1758) between Elland and Brighouse will lead to the disappearance of early cuts which made the Calder more easily navigable. Some remains can still be seen of an early lock at the eastern end of Tag Cut.

At Leeds the **Victoria Mill** on the north bank of the Aire is to be refurbished with a £450,000 grant from the Development Corporation. It was built in 1836 and first occupied by the Victoria Ware Company, which imported minerals and plants and ground them for dyestuffs. Since 1880 it has been used as a warehouse. Another Development Corporation grant will go to restoring 125 Water Lane, **Holbeck**, built in 1808 for Marshalls as a steam powered lace spinning mill.

Listers' **Manningham Mills**, Bradford, is to receive a £10 million grant for conversion of one of the four-storey wings into a luxury hotel and office complex. The City Council is applying to the EC for funding to convert another wing to house the Far Eastern Collection of the Victoria and Albert Museum.

Bradford Industrial Museum is to establish a 'working horse' museum with a £309,000 Urban Development Fund grant, and with horses from the recently closed Museum of the Working Horse in Halifax.

The **Horton Bank Top** and **Brayshaw** reservoirs, on the A647 west of Bradford, which were authorised by an Act of 1868 to supply water to Bradford, are to be drained and landscaped by Yorkshire Water.

A cast iron urinal in the North Yorkshire Village of Great Ayton has been listed. It is the only survivor of three built when the drains failed in 1898-1902. After building it the parish council discovered that they had no legal powers to do so.

Derek Bayliss

OBITUARY

TOM SMITH

Sadly, the untimely death must be announced of Tom Smith, of a heart attack at the start of an industrial archaeology lecture at the Old Station Museum, North Woolwich on 3 June. Tom will be well known to many Bulletin readers as the man who sold the Greater London IA Society books. He joined the GLIAS Committee in 1979 and was a regular attendee at the AIA annual conferences for a decade.

Tom came from Widnes, and joined the Royal Artillery aged 16 in the late 1930s, serving with distinction and being awarded the Burma Star, Good Conduct and Long Service medals. In later years he worked for British Telecom as a clerical officer. He lived in Woolwich in a flat with a view of the river: hence his development of an interest in maritime matters. Tom's special interests included lighthouses and man-powered flight. Those who knew him will recall his reminiscences of watching airliners in South Lancashire in the 1930s, his work in a timber yard and the manning of anti-aircraft guns during World War II.

R J M Carr

MY BEAUTIFUL LAUNDERETTES

As widows taking in washing and municipal public washing facilities waned in popularity and availability so began the era of the do-it-yourself coin operated launderette (along with the first coffee bars which appeared at about the same time with their Gaggia espresso machines, frothy coffee and glass cups). Britain's first coin-operated launderette, which opened on 9 May 1949, is still in business, at 184 Queensway, London W2, operated by Brookford Launderettes. It is almost opposite the recently refurbished Whiteley's, also worth a visit if you are in the area.

In the suburbs landladies probably still did lodgers' washing for them, but Bayswater, classic bed-sitter land, with mostly big Victorian terraced houses, was an obvious place to start this new washing venture. In the early days coin-operated launderettes had a certain cachet as social meeting places and the more literary could read a book while their clothes revolved in the machine before them, looking up from time to time to check that all was well through a circular glass window. This was likened to watching television (presumably soap operas) and was said by some to be more entertaining. Launderettes were perhaps more socially respectable then than now, as you had to have quite presentable washing to be seen doing it in public. This was all long before the onset of spray-can graffiti and vandalism, theft was relatively uncommon, and it was generally safe to be out late at night in the parts of London which had launderettes; and they often stayed open till very late, which was an added attraction. Some 24-hour facilities were available and launderettes were often unmanned.

R J M Carr



September 2-4 1991**ARCHAEOLOGICAL SCIENCE**

a conference on scientific methods in archaeology, at the University of York. Details from Dr J Szymanski, Department of Electronics, York University, Heslington, York YO1 5DD ☎ 0904 432354.

September 2-26 1991**INDUSTRIAL ARCHAEOLOGICAL TOUR OF CHINA**

organised by Occidor Adventure Tours Ltd. Details from Occidor, 10 Broomcroft Road, Bognor Regis, Sussex, PO22 7NJ ☎ 0243 582178.

September 13-15 1991**AIA 1991 CONFERENCE**

in the Black Country, with a pre-conference programme from 9 September. A booking form was circulated in the last AIA mailing.

September 23-25 1991**MUSEUMS AND HISTORIC BUILDINGS IN COLD CLIMATES**

a conference on protecting historic buildings and their collections in these harsh environments, at The National Gallery, Helsinki, Finland. Details from Andrew Millward, The Manchester Museum, The University, Oxford Road, Manchester M13 9PL ☎ 061 275 2667.

September 27-29 1991**ANNUAL CONFERENCE OF THE BRITISH ASSOCIATION OF PAPER HISTORIANS**

at Ambleside in the Lake District. Details from Jenny Hudson, BAPH, Wiggins Teape Research and Development, Butler's Court, Beaconsfield, Bucks HP9 1RT ☎ 0494 675652.

October 11-14 1991**ORES AND MINES**

a residential course at Plas Tan y Bwlch, Snowdonia, on the study of ores and mines of lead, copper and gold from pre-history to recent times. Details from Plas Tan y Bwlch, Maentwrog, Blaenau Ffestiniog, Gwynedd LL41 3YU ☎ 076685 324.

October 17 1991**INTEGRATED STRATEGIES FOR HERITAGE POLICY**

a day course at Ironbridge. Details from Department D, The Ironbridge Institute, Ironbridge Gorge Museum, Trust, Ironbridge, Telford, Shropshire, TF8 7AW ☎ 0952 432751.

October 18 1991**FUTURE POLICIES FOR CONSERVATION LAW**

a day course at Ironbridge. Details available as for 17 October.

November 2 1991**BRITAIN'S WORLD WAR II DEFENCES**

a symposium at Guildford organised by Surrey Industrial History Group concerned with the history and construction of Britain's anti-invasion defences, including discussions of current research. Details from Gordon Knowles, 7 Squirrels Green, Great Bookham, Leatherhead, Surrey KT23 3LE ☎ 0372 458396.

November 4 1991**INDUSTRIAL PRESERVATION**

a day course on the philosophy of preservation, at the Science Museum. Details available as for 17 October.

November 4-8 1991**THE THIRD GLOBAL CONGRESS OF HERITAGE INTERPRETATION INTERNATIONAL**

at Honolulu, Hawaii, on 'interpretation, presentation and the travel industry'. Details from

Region 1 SCOTLAND

Miles Oglethorpe, RCAHM Scotland, 54 Melville Street, Edinburgh EH7 5HF

Region 2 IRELAND

A Montgomery, Assistant Keeper IA, Ulster Museum, Botanic Gardens, Belfast BT9 5AB

Region 3 NORTHERN ENGLAND

Cumbria:
M Davies-Sheil, 12 St Mary's Park, Windermere, Cumbria LA23 1AY
Northumberland, Tyne & Wear, Durham and Cleveland:

G Muirhead, 3 Barton Court, Seaburn Dene, Sunderland, Tyne & Wear SR6 8PF

Region 4 YORKSHIRE & HUMBERSIDE

North, West & South Yorkshire and Humberside:
Derek Bayliss, 30 Muskoka Avenue, Bents Green, Sheffield S11 7RL

Region 5 NORTH WEST ENGLAND

Lancashire, Merseyside, Gt Manchester & Cheshire:
A D George, 30 Kingsway, Worsley, Manchester M28 4FD

Region 6 WALES

Mrs Hilary Malaws, RCAHM Wales, Crown Buildings, Plas Crug, Aberystwith, Dyfed SY23 2HP ☎ 0970 624381 (office hours)

Region 7 WEST MIDLANDS

Shropshire, Staffordshire, West Midlands, Warwickshire and Hereford & Worcester:
John Powell, Ironbridge Gorge Museum Trust, Ironbridge, Telford, Shropshire TF8 7AW ☎ 095245 2752 (office hours)

Gabe Cherem, Department of Geography and Geology, Eastern Michigan University, Ypsilanti, Michigan 48197, USA.

November 26 1991**THE ARCHAEOLOGY OF INDUSTRIAL BUILDINGS**

a day course at Ironbridge. Details available as for 17 October.

April 3-5 1991**THE AIA IRONBRIDGE WEEKEND**

for Affiliated Society representatives and others who wish to attend. Details will be included with the November mailing.

August 16-21 1992**SOCIETY FOR THE HISTORY OF TECHNOLOGY ANNUAL CONFERENCE**

at the Uppsala, Sweden. Details from Uppsala Turist & Kongress, SHOT, S:t Persgatan 4, S-753 20 Uppsala, Sweden. Proposals for papers can be sent to Profess Hakon With Andersen, Center for Technology and Society, University of Trondheim at Lade, N-7055 Dragvoll, Norway.

September 8-9 1992**TWO HUNDRED YEARS OF GAS PRODUCTION IN BRITAIN**

an international conference at the Museum of Science and Industry in Manchester. Offers of papers should be submitted by 1 June this year. Details from Dr Alan Wilson, Museum of Science and Industry, Liverpool Road, Manchester M3 4JP.

September 11-13 1992**AIA ANNUAL CONFERENCE FOR 1992**

at Cheltenham, with a post conference programme until 16 September.

September 10-12 1993**AIA ANNUAL CONFERENCE FOR 1993**

at Ambleside, Cumbria, with an additional programme 8-10 and 12-14 September. Information for the diary should be sent to the Editor as soon as it is available. Dates of mailing and last dates for receipt of copy are given below. Items will normally appear in successive issues up to the date of the event.

Region 8 EAST MIDLANDS

Derbyshire, Nottingham, Lincolnshire, Leicestershire and Northampton:

Peter Neaverson, 6 Grey Crescent, Newton Linford, Leicester LE6 0AA ☎ 0530 242911

Region 9 EAST ANGLIA

Cambridge, Norfolk and Essex:
David Alderton, 48 Quay Street, Halesworth, Suffolk IP19 8EY ☎ Halesworth 2343

Region 10 GREATER LONDON

Dr R J M Carr, 127 Queen's Drive, London N4 2BB

Region 11 HOME COUNTIES

Oxford, Buckingham, Bedfordshire, Hertfordshire and Berkshire:

Ms Kay Owen, 18 Millstream Close, Hertford SG14 1LJ

Region 12 SOUTH EAST ENGLAND

Hampshire & IOW, Surrey, Sussex and Kent:
Mrs Glenys Crocker, 6 Burwood Close, Mellow, Guildford GU1 2SB

Region 13 WEST OF ENGLAND

Somerset, Avon, Gloucestershire, Wiltshire & Dorset:
Mrs Joan Day, 3 Oakfield Road, Keynsham, Bristol BS19 1JQ

Region 14 SOUTH WEST ENGLAND

Devon and Cornwall:
John Stengelhofen, Higher Pencobben, Gwiltian, Hayle, Cornwall TR27 5EE

AIA Bulletin

ISSN 0309-0051

Editor: Peter Wakelin

Designer: John Stengelhofen

Edited from the School of Humanities and Cultural Studies, Wolverhampton Polytechnic, Castle View, Dudley, West Midlands, DY1 3HR, and published by the Association for Industrial Archaeology. Contributions should be sent to the Editor at the above address. Local news and press releases should be sent to the appropriate AIA Regional Correspondents, names and addresses for whom are given regularly on this page. The editor may also be contacted on 0222 465511 extension 269 (a fax is available on this number), or 0222 513775.

Final copy dates currently are as follows:

30 September for November mailing

30 December for February mailing

30 March for May mailing

30 June for August mailing

The AIA was established in 1973 to promote the study of Industrial Archaeology and encourage improved standards of recording, research, conservation and publication. 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 interests of Industrial Archaeology at national level, to hold conferences and seminars and to publish the results of research. Further details may be obtained from the Membership Secretary, Association for Industrial Archaeology, The Wharfage, Ironbridge, Telford, Shropshire, TF8 7AW, England. ☎ 095245 3522.

The views expressed in this Bulletin are not necessarily those of the Association for Industrial Archaeology.