

INDUSTRIAL ARCHAEOLOGY NEWS

110
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1999

THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

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INDUSTRIAL ARCHAEOLOGY NEWS 110 Autumn 1999

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COVER PICTURE

Aerial view of Bath Gas Works, July 1950. From the collection of the Bath Industrial Heritage Trust (see this page)

Photo: Bath Industrial Heritage Trust

Bath's industrial museum

MUSEUM FEATURE: this is the first in a series of articles featuring industrial museums around the country. While Bath is renowned as a beautiful Georgian city, the Bath Industrial Heritage Trust and its museum goes some way to address the balance by showing something of Bath's industrial base.

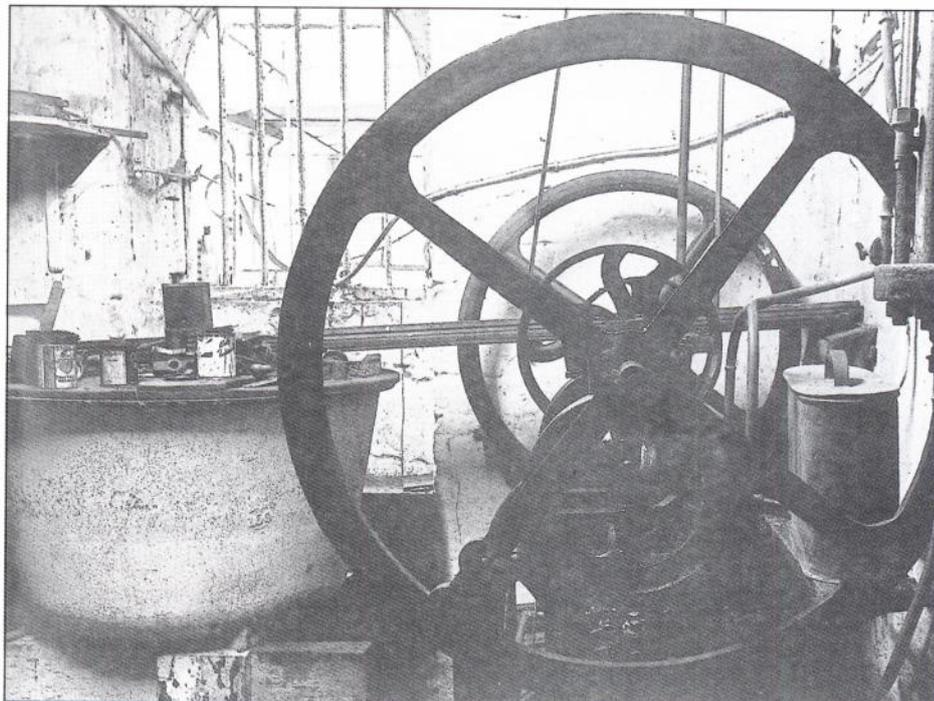
Stuart Burroughs

The Bath Industrial Heritage Trust was formed in 1976 in order to establish a museum to correct the mistaken impression that Bath, as a cathedral city of the South West, was bypassed by the convulsion of the industrialisation over the last 200 years. In the absence of a central museum of the history of Bath, the museum has widened its role in recent years to concern itself not only with the working heritage of the city but with its general social history during this period.

In the late 1960s the general interest in industrial archaeology in the Bristol region with luminaries such as Angus Buchanan, Kenneth Hudson and Neil Cossons at work was reflected not only in the establishment of the Bristol Industrial Archaeology Society (BIAS) but also in the saving in October 1969 of the stock in trade of the Bath firm of J.B. Bowler & Sons Ltd. The firm had closed in the late summer of 1969 when a small group of local enthusiasts, headed by interior designer Russell Frears arranged for the purchase of the contents of the factory buildings prior to their demolition in 1972. Although the original intention had been to simply create a photographic archive of the firm, discussion with Ernest Bowler, grandson of the firm's founder, resulted in the purchase of the contents for £2,000.

In the absence of any movement from Bath City Council to create a local authority museum of industry despite an appeal from Angus Buchanan, the initiative passed to the small group saddled with accommodating the collection of 70,000 objects and 250,000 documents prior to the establishment of a museum centred on the collection. The decision had been taken to recreate the original environment as closely as possible and thus a major requirement was a building with sufficient floor space to accommodate the room recreations. In 1977, after years in store, Bath City Council offered a former Real Tennis Court in the northern part of the city centre for its accommodation. An arrangement was made for the Bath Industrial Heritage Trust (BIHT) formed from the original enthusiasts to upkeep an historic building while using it to display the collection in 'real space'.

Although a museum at this stage concerned with the larger picture of industrialisation of Bath was out of the question due to funding and lack of local authority support the museum which opened in 1978 attempted in part to tell the tale. The firm established by J.B. Bowler in 1872, although starting as a small brass foundry and domestic engineering firm, had expanded by the 1880s to include a mineral water factory, heavy engineering repairs, property speculation, a boot and shoe shop and involvement with a slaughterhouse (adjoining the mineral water factory!) and a haberdashers shop. The firm later opened a garage and reflected in the large company archive is the story of a company which head dealings with practically every other organisation, company (including pubs, breweries, railway companies, canal hauliers, etc, and important residents in the city during its 97-



The carbonating pump at J. B. Bowler's mineral water factory, in 1969. A photograph from the Bowler Collection
Photo: Bath Industrial Heritage Trust

year history. In other words, through examination of the one firm saved from the many, a wider picture could be explored as the city evolved and documents from organisations long disappeared survive amongst the bills and invoices. In addition to reflecting on the commercial and industrial transactions passing through the company the records also reflect on the predicament of rich and poor in the city as it struggled with public health crisis, river flooding and wartime damage.

In addition, the arrangements of the contents of the original premises in Corn Street, Bath, had attracted the eye of Russell Frears and others given that the firm had spent little on investment in the company's plant or premises since the First World War. As a result the original factory was a museum before there was a museum and the recreation of the original ramshackle ambience was a crucial element in attracting visitors, etc. Without wanting to describe the Bowler displays as a 'shortcut' to a museum, the recreated interiors provided an attraction which proved itself very successful from the start and allowed the BIHT, through the proceeds, to explore more fully the other aspects of the city's experience.

Since the museum opened in September 1978 (and celebrates its 21st birthday this autumn), the museum has collected despite a shortage of storage space documentary records (both paper and oral recordings) on many aspects of Bath's working heritage including its extractive (Bath Stone, Coal, Fuller's Earth, etc), manufacturing (heavy and light engineering, textiles, plasticine(!), printing, etc), transport (railway, canal, river, road, etc) and services, especially tourism or visitor-related activities, always the most important element in

the city's employment profile. Luckily, before the museum opened in 1978, the technology department of Bristol City Museum (becoming the Bristol Industrial Museum also in 1978) had been collecting equipment and machinery from Bath and this material remains in store in Bristol. The collection includes a stationary gas engine manufactured by Griffin, extraction equipment from the Bath Gas Works, etc. Ideally BIHT would like to loan some of this material back to its 'home', but at present there is little storage or display space available. Temporary exhibitions with sponsorship from local industry address issues ignored by other museums in the city. These have included issues of public health, the slums district of the city, epidemic outbreaks, industrial pollution as well as descriptions of specific local industry.

Although competition for visitors is keen in Bath - there are 14 other museums in the city let alone many other tourist attractions - the museum has carved itself a niche partly through the undoubted charm of the Bowler displays and partly through its commitment to collect, preserve and explain the less attractive aspects of a city renowned for its Georgian splendours.

As well as the museum displays, the most important documentary collections available for consultation include the Bowler Collection (250,000 documents), Fullers Earth Collection (100,000 documents), British Gas Collection (10,000 items), Stothert & Pitt Collection (40,000 photographs and records), Harbutts plasticine (300 items) and many others.

Bath Industrial Heritage Centre, Camden Works, Julian Road, Bath BA1 2RH. ☎ and Fax: 01225 318348.



Built in Bath: Stothert & Pitt quayside crane supplied to Royal Portbury Dock Photo: Bath Industrial Heritage Trust

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Routeways over Standedge

Bill Slatcher

The activities of transport engineers and quarrymen in the eighteenth and nineteenth centuries have left a fascinating, if complicated clutter of monuments on both sides of Standedge, where a reduction in the elevation of the Pennine watershed to about 1,320 feet between the Colne and the Tame valleys has effectively channelled communications between Huddersfield and Manchester. The routeways are described in this article, which was published in the Yorkshire Archaeological Society Industrial History Section Newsletter No.48, Autumn 1998.

The Wakefield and Austerlands Trust was created in 1758 to turnpike the Yorkshire section of the highway from Huddersfield to Oldham. At Austerlands on the county boundary, it met a Lancashire turnpike of 1735. The alignment was essentially that of the pre-existing highway, widened and metalled to take wheeled traffic with greater convenience. Most of the road was laid out by John Metcalf of Knaresborough. The line of the first turnpike left the modern road near Longroyd Bridge (where it can be seen bearing left) and passed by Crosland Moor and Blackmoorfoot to Marsden. It then passed to the east and south of Pule Hill, crossed the present road near Redbrook Reservoir and regained the modern alignment at Bleak Hey Nook. It was in the half mile to the west of Mount Bar that Metcalf floated his road over a peat bog on bundles of compressed heather. The first realignment came about 1780 when the steep grades from Marsden to Mount Bar and above Bleak Hey Nook were eased. In the 1790s the road from Austerlands to the east of Delph was realigned, Delph by-passed and New Delph then developed.

The Metcalf line from Mount Bar to Standedge Foot, which was steep to the west and wet in the east, was eased by a new high route around 1815. The last major realignment from Huddersfield to Bleak Hey Nook came in the next two decades. A more or less level road was made from Huddersfield to Marsden along the side of the Colne Valley about 1820 replacing the higher line along the ridge to the south. From Marsden it was extended along a completely new line to Bleak Hey Nook through a summit cutting during 1834-39. Two hostleries, the Great Western and the Floating Light near the summit provide an unexpected nautical connection. The Great Western is named after Brunel's ship and the Floating Light after a lightship. The A62 trunk road from Huddersfield to Bleak Hey Nook is a widened but hardly regraded version of this third and last realignment of the turnpike. All three alignments can be seen from the top of Pule Hill near the Standedge summit.

The Huddersfield Canal was authorised in 1794 to link the Ramsden Canal at Huddersfield to the Ashton Canal at Ashton-under-Lyne and provide a third water route between Liverpool and Hull. It was the only narrow canal to penetrate the northern Pennines and always suffered from the inconvenience of a change of gauge (70ft x 7ft to

58ft x 14ft) at Huddersfield. The canal was open to Marsden from the east and from the west to Diggle by 1799, but the tunnel was not complete until 1811. The engineer was Benjamin Outram with a local opportunist, Nicholas Brown, as resident surveyor. The canal cost over £400,000, of which the tunnel claimed £160,000. The canal is nearly 20 miles long, rising steeply to its summit through 493ft and 42 locks to the Marsden end and 338ft and 32 locks to Diggle from the east and west respectively. Whilst the canal could not be called a financial success for its shareholders, it is said to have brought great benefits to the Tame and Colne valleys. It was purchased by the Huddersfield & Manchester Railway & Canal Co. under an Act of 1845 for £183,700 partly in cash and partly in shares in the new undertaking. Thus it passed to the London & North Western Railway Co. and was closed under the LMSR Act of 1944.

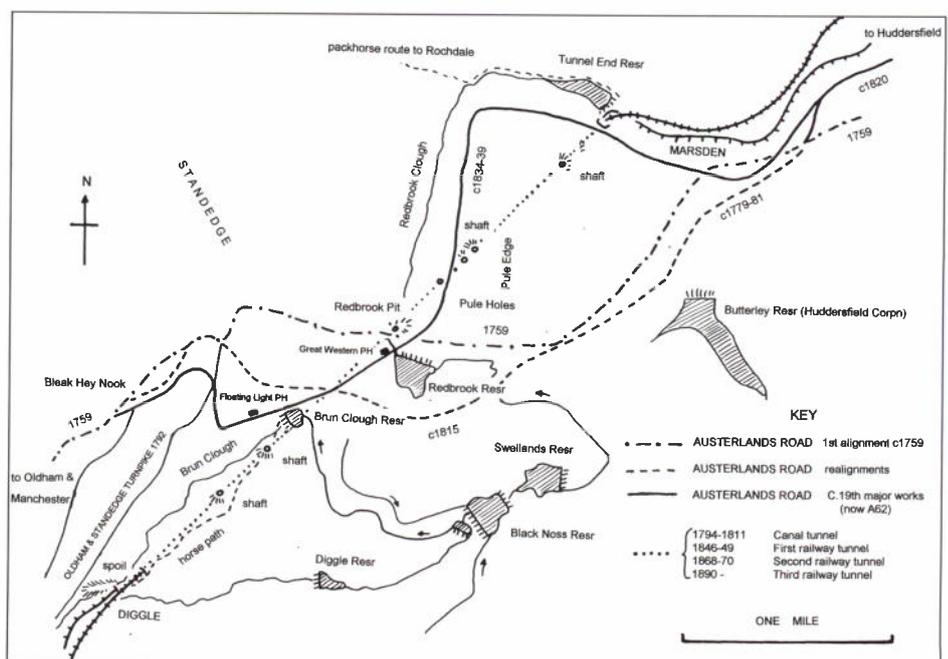
The tunnel was the longest and most expensive in the country. It was 5,436 yards long when built and extended to 5,698 yards when the third railway tunnel was built in 1890-94. Outram's first plan seems to have been to build the tunnel from shaft headings as well as from each end, but in the event, whilst shafts were used for pumping and spoil winding, all the work was done from the ends. In 1796, fourteen pits were being sunk, one large and three small steam engines had been installed at their heads and preparations were being made to erect nine waterwheels for pumping and winding. The large steam engine was at Redbrook Pit and its house survives. Near the shafts at Pule Holes there are remains of an engine house and what appears to be a water channel perhaps to feed one of the waterwheels. This is a complicated site, confused by the works of later railway tunnels and overlain by an incline from a quarry on Pule Edge. There was a horse path over the summit, part of which is now Boat Lane from Diggle towards Brun

Clough Reservoir. It is lost beyond the summit but must have taken a line to Marsden similar to the later realignment of the Wakefield and Austerlands Turnpike.

Despite being well supplied with reservoirs, the canal was often short of water. This was due to the mill owners of the Colne and Tame valleys ensuring the insertion into the enabling act of restrictions concerning the abstraction from streams without compensation. Reservoir water was discharged into streams which were tapped for canal needs. Thus there are few conduits or other feeder works on the canal, though the reservoirs themselves are well supplied with catchwater drains. There are ten reservoirs with a nominal capacity of 323.5 million gallons, the most spectacular is that at Slaithwaite with its 55-ft high and 500-ft long earth dam.

Three railway tunnels were built. Single bore tunnels were made in 1846-49 and 1869-70, and the twin bore tunnel was cut in 1890-94. All lie parallel to and a little above the canal tunnel, which is used to drain and ventilate them and was used to move spoil from the headings during their construction. Though the 1845 Act supposedly protected the interests of canal users, the L&NWR seems to have found ample excuse in repairs to the tunnel for temporary closures which diverted traffic to their railway. Particularly irksome were the long closures in 1892-94 during the construction of the last railway tunnel. Most of the great quantities of spoil found at both ends of the tunnels seem to have come from this last work, explaining the limited surface disturbance over the line of the tunnels. Some of the surface works however may be attributed to the speedily constructed first tunnel.

The approaches to the Standedge crossing are relatively steep, and today the M62 motorway shuns them by taking a more evenly graded but more elevated route several miles to the north. At Standedge, one railway tunnel is still in use, while work is planned to refurbish the canal tunnel.



The Standedge Crossings

A proposed limekiln typology

Following previous discussions at an Ironbridge Weekend, in *IA News* and elsewhere, this article attempts to iron-out the problems by suggesting new guidelines for a typology for the national study of limekilns.

John Leach

In his work *The Unbound Prometheus* (1969), D.S. Landes considered that the extended use of mineral raw materials, was one of the three defining factors of the Industrial Revolution. Although used for many centuries, particularly in agriculture, the use of lime in industry assisted the growth of the old manufactures (glass, iron, paper soap and tanning) and permitted the development of new ones, such as bleaching, chemicals and steel. In addition, the massive expansion of towns and cities was entirely dependent upon the use of lime and chalk mortars, until cement became widely available in the mid-nineteenth century. Production still continues (for pharmaceuticals, plastics etc), and this long use has left a legacy of limekilns of differing shapes and sizes, in rural, coastal and urban situations, in almost every locality in Britain. It is therefore surprising that the study of these important structures has received relatively scant attention from archaeologists and historians.

There are quite a number of important local studies, but very little which looks at limekilns on a regional or national basis. The reason for this I believe is the lack of a suitable tool (i.e. a typology) which enables valid comparisons to be made between types of limekiln in one part of Britain, with those of another. Two main problems hinder their further study on a wider basis. First, until the later nineteenth century, the industry (although extensive) was small scale. Isolation created a

range of nomenclatures which (though charming) are a cause of great confusion to modern students (eg. clamp, pye and sow for one type of earthen kiln). Secondly, the functional process of many early kilns is not at all clear, particularly as to whether they were intermittent or continuous. It is therefore my belief, that only a suitable typology can make the necessary kiln comparisons to enable wider studies to begin, and that this typology, based primarily on function, is the means to ask the necessary academic and practical questions. It will bring order to the debates and begin to shape the future direction and requirements of limekiln research.

The matter was considered by the AIA at Ironbridge in 1994, and the discussions summed up by Geoffrey Starmer (*IA News* 92, 2). The article concludes with three meaningful points about typologies and three dangers. The article is worth reading and I concur with its findings. The 'plus points' are too lengthy to discuss in detail, but are accepted in this article. One has already been considered - a typology 'gives order to study' and is '...a tool in pursuing academic development'.

Currently there are two limekiln typologies - one in print and a second being proposed in English Heritage's *Monument Protection Plan: the lime, cement and plaster industries* (MPP). The first, a local one, concerns kilns in Dorset (see *IA News* 92, 3) and focusses upon the drawing arch as 'the most prominent architectural feature'. For a stylistic study the design and shape of the arch may well be appropriate, and in a local study such as this it can be very useful, particularly when trying to identify local groupings and builders. However, I believe that this approach is too limiting for wider studies.

The typology being advanced within the

ongoing debate in the MPP focusses upon the evolutionary development of limekilns. That too has many positive features, especially for anyone beginning their study. However, it still retains many local nomenclatures and conveys the erroneous idea of steady and progressive development. Whilst acknowledging their positive aspects, my argument against these typologies is that they are too heavily based on local and subjective criteria.

Another of the 'plus points' referred to in Geoffrey Starmer's article is that typologies are '...the study of types, which are classes of things having some common characteristics'. That is true, but tends to obscure the need for the typology to be based on the differences between the common types. To be robust the typology needs to be firmly based on objective differences, or criteria, and these alone. Local names and practices must not be lost, but recorded in local studies. The following typology (submitted to English Heritage as part of the MPP debate) is primarily based on function and is, I believe, a more objective approach.

The typology proposed (Fig.1) makes an initial division between the two fundamental functional differences of limekiln design - whether the process of calcination is intermittent or continuous. It then sub-divides again as it considers, functionally, whether the fuel was mixed with the limestone (mixed feed), fed at the point of burning (dual feed) or whether the heat alone, and not the fuel, was/is passed through to the stone (separate feed). This level of division in the typology also demonstrates the 'structuring [of] data in sequence by considering changes through time' - the third of the plus points in Geoffrey Starmer's criteria.

The final division is based on structural design rather than function, and reflects the wide diversity of limekiln types. In this, the typology avoids



Continuous, horizontal separate feed kiln of the 'De Witt' design at Amberley, Sussex (Type CS3)

Photo: John Leach



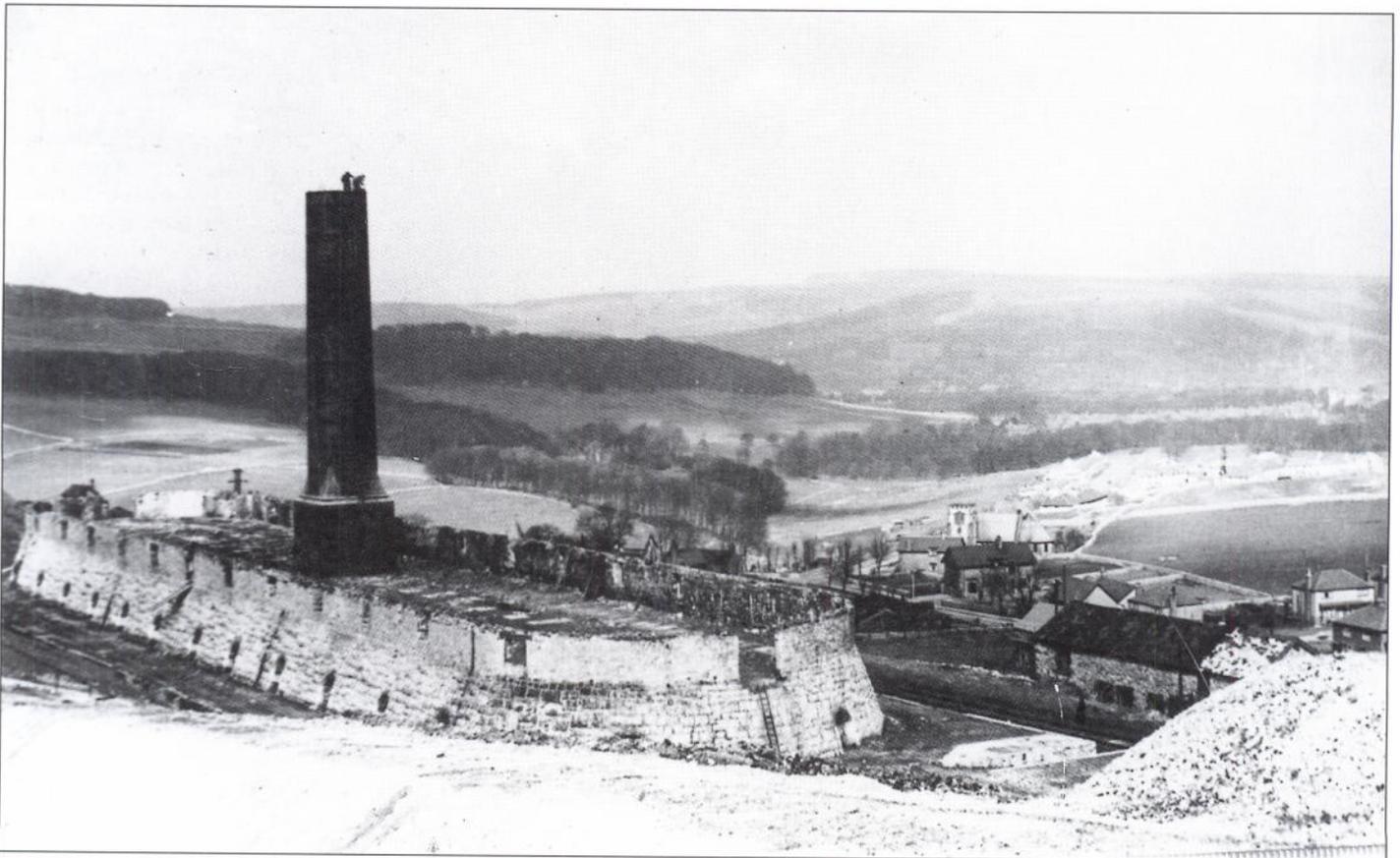
Intermittent, mixed feed kiln, made from a natural declivity in the ground, near Taddington, Derbyshire (Type IM1)

Photo: John Leach



Continuous, vertical mixed feed kiln of masonry construction, Lindisfarne, Northumberland (Type CM2). Compared to the Boscastle kiln, this is of greater size, different appearance and has more 'pots' (or burning units) within. However, it is identical in function and basic structure. Size, appearance and the economic usage (i.e. the number of 'pots') are purely subjective matters

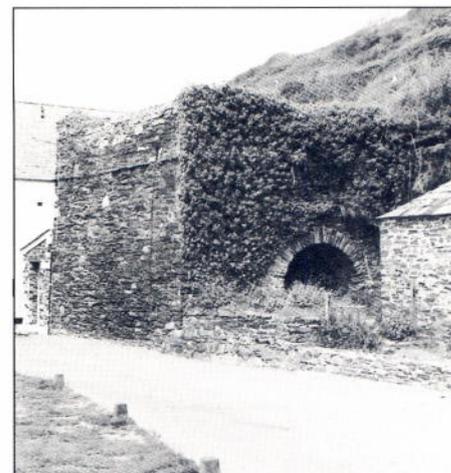
Photo: John Leach



Continuous, horizontal mixed feed kiln, of the 'Hoffman' design, at Harpur Hill, Derbyshire. Now demolished (Type CM6)

Fig.1: Limekiln typology by function and structural design

Intermittent kilns [I] (includes periodic kilns)	Mixed feed kilns [IM]	Natural declivity in ground	IM1	
		Vertical furnace (earthen) [includes 'sod' & 'pudding pie' kilns]	IM2	
		Horseshoe (brick/masonry)	IM3	
		Vertical furnace (brick/masonry)	IM4	
		Vertical furnace (subterranean) [includes 'Norfolk' kilns]	IM5	
		Clamp [includes 'pye' & 'sow' kilns]	IM6	
		Other	IM7	
Separate feed kilns [IS]	Flare [includes 'pot' kilns]		IS1	
		Other	IS2	
Continuous kilns [C] (includes draw & running kilns)	Mixed feed kilns [CM]	Vertical furnace (earthen)	CM1	
		Vertical furnace (brick/masonry)	CM2	
		Vertical furnace (metal)	CM3	
		Vertical furnace (twinshafts inside one kiln) [includes 'Dietzsch' kilns]	CM4	
		Horizontal furnace	CM5	
		Horizontal furnace ('Hoffman')	CM6	
		Other	CM7	
	Separate feed kilns [CS]	Vertical furnace [includes 'Rumford' kilns]		CS1
			Horizontal furnace	CS2
			Horizontal furnace ('De Witt' kilns)	CS3
			Other	CS4
	Dual feed kilns [CD]	Vertical furnace (conventional grate) [includes 'Brockham', 'Aalborg', 'Smidth' and 'Spencer & Ryan' kilns]		CD1
			Vertical furnace (special grate) [includes 'Hauenschild', 'Cornet', 'Duchez', 'Candlot', 'Perpignani', 'Campbell' and 'Steiger' kilns]	CD2
			Vertical ring furnace [includes 'Chaudiere' kilns]	CD3
			Inclined furnace [includes 'Rotary' kilns]	CD4
			Horizontal furnace	CD5
			Horizontal furnace (Calcamatic)	CD6
			Other	CD7



*Continuous, vertical mixed feed kiln of masonry construction, Boscastle, Cornwall. A traditional kiln structure (Type CM2)
Photo: John Leach*

superficial criteria. It also recognises that it is not an exhaustive list of types, but provides the framework for others to be classified with those of similar function and design. The abbreviations are not strictly necessary, but may provide a useful shorthand. With our limited understanding of limekilns it might be argued that any typology is premature, but to produce one now will provide a useful tool for much needed future studies.

Unless one looks for some superficial feature, typologies of limekilns will not be easy to use in the field. Because this model has structure as its third category, it could be crudely used in reverse, to postulate possible types, as well as raising questions about process times and feeding methods. There is much data to be collected by the field archaeologist, but this needs to be analysed in conjunction with historical research. The fundamental (and most difficult) question to be asked of any kiln is whether it is intermittent or continuous. For early kilns, the present level of knowledge makes this is hard to assess, but criteria will be developed as research complements archaeological studies. This research however, needs to avoid local terminologies which often allow the fundamental questions to be avoided. A typology based primarily on function places these questions in stark relief. Some kilns will (for lack of historical data) never find their true place in the typology, and will always remain the subjects of local study. Other limekilns will take their place within the typology and become part of the corpus of national limekiln types.

In conclusion therefore, I would argue that to promote the study of limekilns and limeburning on a regional and national basis there is an urgent need for a robust typology. Secondly, I would argue that the criteria for that typology must be objective and avoid (except for local studies) superficial elements. Here, archaeological study can only achieve so much and must be complemented by historical research. That has been the basis for the most successful studies to date. The typology that I have proposed is the result of consultation with colleagues of an earlier model. It may not yet be sufficiently refined, but I believe it provides the basic framework and I would welcome further comment.

Definitions:

Intermittent kiln : one that is loaded, burnt and drawn intermittently; ie. it is cooled before drawing.

Continuous kiln : one that is loaded, burnt and drawn in a continuous process.

Mixed feed kiln : one where the fuel and limestone/chalk are supplied down one shaft and burnt together.

Dual feed kiln : one where the fuel and limestone/chalk are supplied down adjoining shafts and burnt together.

Separate feed kiln : one where the fuel supply and heat source are separate from the limestone/chalk.

Copyright : John Leach (May 1999)

Reminder! Last opportunity to book for the 1999 Conference

AIA Conference, Chatham, Kent Friday 10 - Sunday 12 September 1999

There is much to see in the Kent and south London area. And there are still some places available! The conference will be based at the Medway campus of the University of Greenwich at Chatham in some of the listed buildings of the old Naval College. The venue is literally over the road from the Historic Dockyard and our residential accommodation is in recently built single study bedrooms with en-suite facilities.

Topics covered will, as usual, be many and various and include paper, brewing, concrete, pumping engines, the dockyard, barges, paddle steamers, oast houses, railways, powder mills, traction engines, Napoleonic defences, windmills, engineering, coal and iron and more!

The seminar programme on Friday 10 September covers current research on topics in London and the Thames estuary.

Details of the conference programme and a booking form have been circulated. If you haven't got one or would like further copies for friends and/or colleagues, please contact:

AIA Office, School of Archaeological Studies, University of Leicester, University Road, Leicester LE1 7RH. ☎ 0116 252 5337, Fax 0116 252 5002 or e-mail: aia@le.ac.uk. See us on the web at <http://www.twelveheads.demon.co.uk/aconf99.htm>

Bookings will be taken up to Friday 3 September 1999. Bookings will be handled by Tony and Mary Yoward up to 30 August 1999, but please note any queries after that date or last minute bookings must be addressed to the AIA Office at the address above for the attention of Janet Graham.

The AIA looks forward to seeing you in Kent in September!

The Archaeology of Industrialisation Conference

A conference at Bristol University, on 14-16 October 1999, has been organised jointly by the AIA and the Society for Post-Medieval Archaeology. Proposed lecture themes include, for Thursday: 'perspectives on the archaeology of industrialisation' and 'material culture and social change'; for Friday: 'settlement and the urban landscape', 'industry in the rural landscape' and 'industrial structures: problems of recording'; for Saturday: 'the influence of the past on the present', followed by an optional coach tour

of the urban landscape of Bristol. If you have not received details and a booking form, please contact: AIA Liaison Officer, School of Archaeological Studies, University of Leicester LE1 7RH.

Mailings of IA News

Did you receive your copy of *Industrial Archaeology News 109* back in May? We hope so, but due to certain mailing problems, it may be that some readers missed theirs. If you are one of the unlucky few, we apologise and would ask you to contact the AIA Office, School of Archaeological Studies, University of Leicester, University Road, Leicester LE1 7RH.

EDUCATION

Surrey lectures

The Surrey Industrial History Group's 24th annual series of 11 lectures will begin on Thursday 5 October at the University of Surrey, Guildford, and continue at fortnightly intervals. Topics include early water turbines, industrial history records, the gas industry, Dorothea Restorations, Woolwich Arsenal, Kew Bridge Steam Museum and London Underground. Details from Tony Stevens ☎ 01483 565375, or e-mail: a.h.thomas@btinternet.com. The lectures are organised by SIGH which grew out of an adult education course on industrial archaeology held at the University in 1975. The group has a website at <http://www.shs.surreycc.gov.uk/sihg/>

Lectures at Kew Bridge

A 22-meeting course 'An Introduction to British Archaeology' with Dr Robert Carr is being held on Monday afternoons beginning 27 September 1999 at Kew Bridge Steam Museum, Brentford. The course will explore IA with particular reference to Greater London, with walks and visits. Enrolment and enquiries to: Anna Colloms, Executive Officer for Archaeology, Faculty of Continuing Education, Birkbeck College, 26 Russell Square, London WC1B 5DQ. ☎ 0171 631 6627, e-mail: a.colloms@bbk.ac.uk

Professional Archaeology Courses

One- or two-day courses being run by University of Oxford Department of Continuing Education between October 1999 and June 2000 include publishing on the web, health and safety, planning and development, aerial photography and photographing historic buildings. Two survey weeks cover historic buildings and earthworks. The courses, part of the Postgraduate Diploma and Master of Studies in Professional Archaeology, are open to all. For information contact: the Professional Archaeology Course Secretary, OUDCE, 1 Wellington Square, Oxford OX1 2JA, ☎ 01865 270360.

ADVERTISE IN IA NEWS

IA News reaches a wide readership through direct subscriptions, circulation to affiliated organisations and use in libraries.

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All proceeds contribute to the costs of the Newsletter and the work of the Association which is a Registered charity. Inserts may be mailed with IA News at a charge of £25.

For further details, contact the Editor.

SITUATIONS VACANT

Due to the commitments of the present incumbents, AIA will be looking for a new SECRETARY and a new CONFERENCE SECRETARY at the next Annual General Meeting. David Alderton can give details of what the jobs entail. We would also like to compile a register of those members who are willing to help in the administration of the Association. If you can help in any way please contact David Alderton, 48 Quay Street, Halesworth, Suffolk IP19 8EY, as soon as possible.

Readers are encouraged to write to the Editor with their views on matters raised in IA News, or other current issues.

James Muspratt

I am researching the life and times of James Muspratt, alkali manufacturer and founder of the British chemical industry. I have seen a short article in *Industrial Archaeology Review*, vol III, 96, but are there any readers who may be able to give further information? I would be grateful for any contact.

Mrs J. Thomas
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Australia
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Malleable iron

I read John Harrison's letter ('Dorman Long's Australian trusses', *IA News* 109, 9) with interest, but I wonder about his use of the term 'malleable iron' in connection with rails. In my experience, the term was used exclusively for castings of white iron that had been heat treated to remove free carbon (the cause of brittleness in untreated cast iron). Fifty years ago I worked for a firm that used levers of (cast) malleable iron in the construction of apparatus for water treatment. The usage is confirmed in

the much earlier Cassell's Engineer's Handbook, which bears no date, but certainly goes back to around 1900. There are many references in it to wrought iron, but the two entries for malleable iron concern the cast variety. Perhaps the term was used more generally in the 1870s.

Ray Cobbett
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Riddle of the sands

Here's a road riddle from New South Wales. A road was built before 1837 from Murramarang (2 miles south of Bawley, which is 150 miles south of Sydney, on the coast) to Ulladulla (15 miles north). Its route seems very strange to us, as it crossed the mouths of five lakes. These are small as lakes go, and usually closed by sand at the mouths. Heavy rain opens them, and later fine weather and moderate seas close them again. These crossings could have been avoided by routing the road a couple of miles inland. Why was this not done? We can only guess: perhaps fears of ambush by aborigines, or perhaps (and this is one point on

which I would be glad of comments) they wanted to use the beaches as free bits of road - no initial cost, no upkeep! They may not have known the lakes opened - in drought they can remain closed for years. The road was built to transport farm produce to Ulladulla, where it could be shipped to Sydney. The road was in use for some decades, but I am not sure how many. In at least one traveller's tale, it was referred to as a dray track.

A stone ramp was built to get the road down from one headland to the mouth of the lake just in front of our cottage at Bawley. The archaeologists plan to dig near this, to see how deep the foundations are, and to see if they can confirm the date.

When the lakes are closed, there are stretches of dry sand some hundred metres long through which the drays or wagons must have been moved. We do not know what types of vehicle were used, or whether horses or bullocks. We are interested in trying to get some feel for what would have been possible, but I realise there are very many variables, and we might not get far (there has been mention of a German wagon or dray, but I do not recognise this term).

What loads could be pulled by how many bullocks/horses through level dry sand? How would this depend on the size of wheels (diameter and width of rim)?

Does any reader know of any situation in UK or elsewhere where beaches were deliberately used as part of an early road?

The archaeologists (Michael Tracey and his wife Jennifer) think some marks they found in exposed bedrock at the foot of the ramp were chisel marks, suggesting convicts made the marks when making the road, but I (with due respect) feel they are more likely the marks left by caterpillar tractors, taken down the ramp in later years to open the lake (the lake was opened by men with shovels in the 1920s and '30s). The road was one of the earliest in the Milton district. Murramarang was settled about 1832, and convicts were assigned to the settler to help him get the place established. being so early, it is almost certain the road was not surveyed before work started - I imagine the boss just said to the overseer 'build a road to Ulladulla.'

Bruce Hamon
bhamon@hotmail.net.au

By the time you read this London's most recent aeroplane factory will have closed. This was at the Tate Gallery and made (or was to have made) rubber-band-powered flying model aeroplanes from balsa wood, tissue paper and plastic etc. A fascinating robotic production line sponsored by American Airlines was to have turned out 180 flying models per day. At the end of the automatic production line the models would be launched (without human intervention) and fly up and round the gallery before landing on the floor, to be retrieved by a gallery attendant and taken to a nearby sales point. Paradoxically aircraft, unlike motor cars, have seldom been really mass produced. Henry Ford had dreams of mass producing his tri-motor aeroplane prior to World War II but this never came about. Most recent aircraft (being very expensive) are essentially hand built in quite small numbers.

At the Tate Gallery the concept was to fill the available exhibition space with flying model aeroplanes and then sell the test-flown products at a low price to gallery visitors. From American Airlines' point of view this art work made reference to mass production and the American way of life and cheap airline flights to the United States. People who bought the models and were then seen with them in London would be an additional advertisement. At the time of writing the production line is not working satisfactorily and they are still tinkering with it. The technicians have until 18 July to get it going. Using art terminology, currently this is a 'work in progress'.

The aircraft factory art work entitled 'When Robots Rule: The Two Minute Airplane Factory' is the conception of American artist Chris Burden

COMMENT

who lives in Los Angeles. This is his first major exhibition in the UK. Chris Burden, the son of an engineer, is fascinated by technology. He makes the point that most people have almost no understanding of how the world we live in functions or how the things we use are manufactured. The model aeroplane to be mass produced at the Tate is a (slightly modified) American design classic from 1979.

For those still used to thinking art is just about putting paint on canvas the popular television series 'This Is Modern Art' might be an introduction to this sort of thing. Presently conceptual art is the cutting edge of the subject and regularly impinges on archaeology both industrial and otherwise, attracting funding industrial museums sadly lack (a working robotic production line is scarcely cheap even if made up of standard components). It almost seems that conceptual artists gain inspiration from what we do. Recent work can be disturbingly close to current archaeological initiatives and if no one is actually looking over our shoulders the resemblance is uncannily close.

The Tate's aeroplane factory is a real one, not a model of a factory, and demonstrates mass production in an ingenious and entertaining manner. Five or ten years ago we might have expected such a demonstration production line in action at the Science Museum, South Kensington (or even in Birmingham); the present venue indicates how much our culture has shifted towards the fine arts. If the Tate get their factory to work the general public are likely to find this new art work more exciting than minimalist bricks or melting ice (even if the melting is speeded up). For further information telephone 0171 887 8725.

Robert Carr

Prince of Wales supports IA

'Making Heritage Industrial Buildings Work' was the title of a conference held in the Swindon railway works on 26 April, where speakers included the Prince of Wales, Philip Lader (US Ambassador), Howard Stringer (Chairman, Sony Corporation of America), J.W. Kaempfer (Chief Executive, BAA McArthurGlen, the developers of the factory outlet shopping centre in the Swindon railway workshops), Pam Alexander (Chief Executive, English Heritage), and Fred Taggart (Director, Regeneration Through Heritage).

The conference was organised by Regeneration Through Heritage, an arm of Business in the Community, which was set up by Prince Charles some three years ago, to encourage the re-use of buildings. In his speech, the Prince cited examples of successful 'flagship' developments such as Dean Clough Mills, Halifax, Saltaire Mills, and of course the Great Western railway workshops at Swindon, while there are many lesser projects equally deserving attention and praise.

The theme of the conference echoed by all speakers was that heritage sites can play a full part in the regeneration of run-down areas, where vision and willingness to take risks can reap enormous benefits. 'Partnership' between business, local authorities and other agencies was a key word.

Big business is at last taking a positive view of the value of retaining and not destroying heritage industrial buildings in new developments, to give workers and visitors alike a sense of value, history, pride in their town or workspace. Conversion/adaptation may be more 30% more expensive (but not always) than new-build but the pay-off is seen in the resulting added-value of the scheme. Regeneration is deemed 'good business' and if the scheme is sound, everyone benefits and is happy - the developers (who risk their money), the workers, shoppers, general public and, of course, the historians and industrial archaeologists!

The Regeneration Through Heritage Handbook is soon to be published, billed as a 'how-to-do guide for community groups and voluntary organisations aiming to re-use heritage industrial buildings for contemporary economic and cultural uses.'

Helicopter first

Last year the Yorkshire Dales National Park undertook the consolidation of the Blakethwaite smelt mill in Gunnerside Gill off Swaledale. Because of its remoteness from suitable tracks, materials had to be lifted in by helicopter in what may be the first time this method has been used for conservation of an IA site (and perhaps the third time for any archaeological site). Work continues in 1999.

Standedge Tunnel repairs

A multi-million pound scheme, scheduled to last 92 weeks, is underway in West Yorkshire to repair and re-open Standedge Tunnel on the Huddersfield Narrow Canal. The 20-mile canal, opened in 1811, is the shortest of three trans-Pennine waterways and is currently being restored thanks mainly to funding by the Millennium Commission and English Partnerships. Huddersfield Canal Society volunteers started the push for restoration 25 years ago and were later joined by British Waterways and Tameside, Kirklees and Oldham Councils.

Standedge Tunnel, from Marsden to Diggle was blasted through solid rock using gunpowder. Excavations were driven from both ends but failed to meet in a straight line, so the tunnel has a bend because of an alignment error of nearly 8 metres. The 5,200-metre tunnel took nearly 16 years to complete and was fraught with difficulties. There was a huge cost in human lives.

In 1988 engineers from Ove Arup and Partners found that 40 per cent of the tunnel had unsupported rock

and there had been several falls, blocking the passage for boats. Both stone and brick had been used to line the tunnel - some of the masonry was reported to be in remarkably good condition but the survey found that most of the unsupported rock needed stabilising. The rockbolting system of fixing rock back into the rock mass will be used in the renovation work, together with the use of spray concrete. The removal of up to 2 metres depth of silt is another problem to be tackled.

Because there was no towing path, boats had to be legged through, the average time for a passage being four hours. When the tunnel is navigable again, it is planned that boats will be towed through by an electric tug to cut exhaust emissions.

The tunnel is regarded as a major heritage structure and a monument to the industrial revolution when men toiled to create one of Britain's most significant engineering achievements. The Standedge crossings are described on page 4.

Heritage Lottery Grants

Heritage Lottery Fund Grants announced between 1 October 1998 and 12 May 1999 include the following projects in England, Wales and Scotland:

Cheshire: Quarry Bank Mill, Styal (£103,000)

East Riding: Skidby Windmill (£236,400)

East Riding: Waterways Museum, Goole (£400,000)

East Sussex: Newhaven Fort (£750,000)

Hampshire: Hollycombe Working Steam Museum (£766,300)

Kent: Kent Windmills restoration programme (seven) (£400,000)

Leicestershire: Moira Furnace

Museum Trust (£18,000)

Merseyside: Friends of Leasowe Lighthouse, Wirral (£6,200)

Merseyside: Southport Pier (£1,700,000)

Norfolk: Denver Windmill (£378,000)

North Yorkshire: Pickering Station (£312,000)

North Yorkshire: Settle-Carlisle Railway, Settle (£42,000)

Nottinghamshire: Mansfield Railway Station (£322,125)

Oxfordshire: Oxford Bus Museum, Long Hanborough (£198,500)

Shropshire: Coalbrookdale Project (£3,993,000)

South Yorkshire: Ken Hawley Collection Trust, Sheffield (£120,000)

Stoke-on-Trent City: Etruria Industrial Museum (£290,500)

Stoke-on-Trent City: Gladstone Pottery Museum (£998,000)

West Midlands: Severn Valley Railway, Aggborough (£1,757,000)

West Sussex: Amberley Museum (£20,300)

West Sussex: Weald & Downland Open Air Museum, Singleton (£1,058,000)

West Yorkshire: Keighley Bus Museum, Denholme (£20,500)

Conwy: Great Orme Tramway, Llandudno (£961,000)

Flintshire: Greenfield Valley Park Mills, Holywell (£331,900)

Gwynedd: Ffestiniog Railway Trust (£375,000)

Powys: Newtown Textile Museum (£40,000)

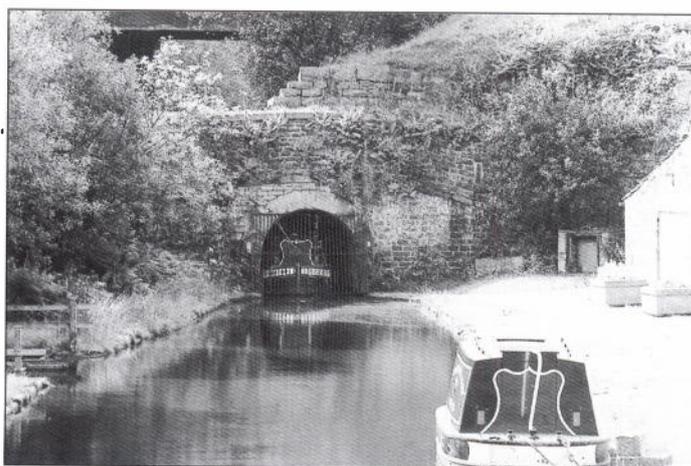
Fife: Scottish Lime Centre, Charlestown (£282,000)

Witney mill plans

In Witney, Oxfordshire, recent plans have been put forward to redevelop Woodford Mill (once Early's Blanket Factory), respecting the setting of the buildings in a project which includes 59 houses and flats with work units, a heritage trail and museum.

1999 Civic Trust Awards

Among the Special Awards Shortlist for 1999 were the following projects of interest: Barbican Glassworks, Plymouth; The River Skerne Restoration Project, County Durham; Restored Landscape at Clee Hill Quarry, Shropshire; Conversion of Boughton Pumping Station, Nottinghamshire.



Marsden Entrance to the Standedge Tunnel

Photo: Huddersfield Canal Society



Gathering of short boats at Shipley on the Leeds & Liverpool Canal, May 1999
Photo: British Waterways

'Short' boat gathering

British Waterways recently sponsored a Heritage Boats Festival on the Yorkshire side of the Leeds & Liverpool Canal, with weekend events in April at Skipton and Bingley, finishing on the May Bank Holiday weekend at Shipley. This saw a gathering of nine restored 'short' boats, originally built especially for service on this canal; among them was the 'Severn', the last short boat operated on the canal by British Waterways. Next year's event will be held at Burscough on the Leeds & Liverpool Canal in Lancashire over the same May weekend.

BIAS Brunel Prize

The Bristol IA Society established this prize in 1997 to encourage archaeological and other research into, and the publication of work on, the industrial archaeology of the Bristol region. It is awarded every two years and entries will be considered for publication in the *BIAS Journal*. Entries for the next prize should be submitted by 31 August 2000 for the 2001 competition. Further details can be obtained from Mike Bone, 'Sunnyside', Avon Close, Keynsham, Bristol BS18 1LQ.

Hampton Waterworks redevelopment

Land at the large Hampton site to the west of London is becoming redundant owing to changes in water distribution technology. In May, a Community Planning Weekend was held to give local residents an opportunity of inspecting the site and to express an opinion on how redevelopment might take place.

Listed buildings and filter beds are being decommissioned and the Eastern Works, where there are a number of fine beam engine houses, is likely to be opened up for limited housing development and community use with improved access to the river as a consequence. A number of Focus Groups were set up in June to consider different aspects of the redevelopment in detail including a Heritage & Railway Group (there was once a narrow gauge railway communicating with Kempton Park Waterworks which used steam locomotives). For more information or a copy of the Planning Report contact Sue Hargreaves at John Thompson and Partners, ☎ 020 7251 5135.

Robert Carr

Board house

John Board began exploiting the Lias limestone near Dunball Wharf on the River Parrett in Somerset during the 1840s. His early interest in Portland cement resulted in an invitation to display classical figures made from the material at the Great Exhibition of 1851.

Today, an unusual legacy of John Board & Co. is a building known as Castle House in Queen Street, Bridgwater, which was at one time the residence of the firm's founder and the company office. Its construction incorporates architectural features in cement and concrete whilst internally the structure is supported by innovative systems of reinforcement.

Sadly, several initiatives to restore and re-use Castle House have been unsuccessful and the building has deteriorated. However, a meeting

convened in November 1998 by Sedgemoor District Council to debate its future was well attended with both national and local bodies represented. The unanimous feeling was a structural survey should be made, resulting perhaps in Castle House emerging as a structure worthy of Grade II* listed status

rather than the present Grade II. This, in turn, could lead to the establishment of a programme of restoration of this historically significant building.

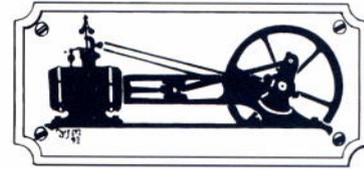
Brian Murless

Train flies again

The famous 'Flying Scotsman' locomotive, rescued from the scrapheap and restored at a cost of nearly £1m, flew back into the public eye on Sunday 4 July, steaming from King's Cross to York. The 250 passengers are said to have paid £350 each for the privilege. The locomotive, built in 1923, travelled some two million miles during its service on the railways.

More stamps

Celebrating 1000 years of British industry under the theme 'Workers' Tales', stamps issued on 4 May 1999 featured weaver's craft (19p), shipbuilding (44p) and mill towns (26p), this last based on David Hockney's painting 'Salts Mill, Saltaire Yorks'.



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Castle House, Bridgwater, photographed in 1987
Photo: B. Murless

Michael Stratton

The world of industrial archaeology has lost one of its most forward-looking practitioners with the death, at the age of only 45, of Michael Stratton.

Michael John Stratton was born, and went to school, at Barnet in North London, where the proximity of the east Coast main line was to engender in him a lifelong love of railways, particularly the LNER and Gresley's pacifics. Having gained four 'A' levels, including one in art, he took a degree in Geography at Durham University from 1972-75, and followed this with MA's in Victorian Studies at the University of Leicester (1975-76) and in Town and regional Planning at the University of Sheffield (1976-78). In 1978 he embarked on a PhD on the Manufacture and Utilisation of Architectural Terracotta and Faience at the University of Aston, under the supervision of Jennifer Tann.

In 1980, Michael was taken on as a Lecturer in the Department of Economic & Social History at the University of Birmingham, though little of his time was to be spent on the main campus at Edgbaston. He was outstationed at Ironbridge, where his particular brief was to make a success of the embryonic Institute of Industrial Archaeology, the brainchild of his Head of Department, Professor John Harris, and the Director of the Ironbridge Gorge Museum, Neil (later Sir Neil) Cossons. Michael set about this task with great enthusiasm, his capacity for hard work and his personal charm winning over many of the doubters (including more than a few lukewarm members of this Association!) who thought it would never happen. He developed what was to be a long and fruitful partnership with the Institute's second resident lecturer, Barrie Trinder, and by the summer of 1983 the first intake of students had completed their studies at Ironbridge. Many more were to follow during the ensuing years, the hallmarks of the Institute being not only its high quality teaching and excellent field trips, but also a relaxed atmosphere where Michael and Barrie often became lasting friends of their students, as well as their mentors.

Once the Institute was firmly established, Michael Stratton was able to devote more of his time and his considerable energy to writing, and from the mid-1980s onwards

there flowed a steady stream of meticulously researched publications which was to be stemmed only by his death. He wrote numerous articles for learned journals - including this Association's *Review* - on a variety of subjects, often connected with architectural ceramics. Together with Barrie Trinder and other Institute colleagues and students, he contributed to numerous reports for English Heritage and other organisations - the one on Stanley Mill in Gloucestershire being a particularly fine example. In 1993, he published his first book *The Terracotta Revival*, and this was to be closely followed towards the end of his Ironbridge period by *British Car Factories from 1896* (with Paul Collins, 1993) and *Ironbridge and the Electric Revolution* (1994). Michael was also much in demand as a speaker both in the United Kingdom and overseas; he regularly attended, and read papers at, the biennial TICCIIH conference, and went on more than one study tour of the United States where his knowledge of terracotta and allied topics was particularly valued.

Michael Stratton's distinguished career at what by now had become the Ironbridge Institute, where he had progressed to Programme Director, came to an end when he took up a position, in January 1995, at the Institute of Advanced Architectural Studies at the University of York. Once again, Michael's ability to identify with his students was soon made apparent, and his administrative skills were much to the fore during the subsequent incorporation of the IAAS into the Department of Archaeology, where he was appointed Senior Lecturer in Conservation Studies. The publications continued to appear, most notably *Conservation of the Railway Heritage* (with Peter Burman, 1997) and the Batsford *Book of Industrial England* (with Barrie Trinder, 1997). Michael was invited to deliver the Association's Rolt memorial Lecture at the Newcastle Conference in 1997, and read an excellent paper on Steel and Concrete Construction in the North of England from 1860-1939 (publication pending). He had several projects under way when his illness was

diagnosed in January, and remarkably, he had the courage and stamina to continue working on them as long as he was able. We extend our deepest sympathy to his wife Annabel, and his two young sons Andrew and Timothy.

Many members of this Association will have their own fond memories of Michael. I recall the occasion on which he was invited to attend a pre-Conference Council meeting at Strathclyde University in 1985 to undergo a grilling as to why the Institute was not, so the Council claimed, liaising closely enough with the AIA. We decided to travel up together and make something of a short break of it. Needless to say, Michael's personal charm and professionalism soon silenced his critics at the meeting, and I was fortunate enough to enjoy a journey on the Fort William to Mallaig railway line in the most delightful and stimulating company, and as an added bonus I had the best walking tour of the architecture of Glasgow that anyone could hope for. We will all miss him greatly.

John Powell



Michael Stratton (fifth from right), as many will remember him, passing on his knowledge and enthusiasm to students. The group, from the Ironbridge Institute, has just reached the surface after an arduous underground tour of the now closed Hem Heath Colliery in Stoke on Trent.

Photo: John Powell

Home Counties

The south side of the market place in Wantage contains many buildings which, like the structures lining the streets on a 'Wild West Town' movie set, are false-fronted. Georgian, or sometimes slightly later flat fronts, often with fake windows at third-floor level, from street level obscure the sloping roofs of the buildings behind. Although in some cases the ground floor shop facias are rather hideous, reflecting modern corporate identities, many of the buildings contain considerable amounts of sixteenth-century (sometimes earlier) work, and the relationship of their floor plans to the burgage plots of the early town can be easily identified.

One such building is 'London House', adjacent to the nineteenth-century 'Victoria Cross Gallery', and the Georgian 'Bear Hotel', the former premises of Arbery & Son Ltd. The founder was a silk merchant who moved to Wantage from Wellington, Somerset. In 1894, John Nicholas Arbery, who had previously run the business with a Jesse Lay, as Lay & Arbery, continued the enterprise as John N. Arbery; later J.N. Arbery & Son.

A 1911 advertisement for this remarkable small town drapers and outfitters mentions: linoleums, carpets matting and rugs; lady's millinery, costumes and rainproof coats, and mens, youths and boys ready to wear clothing and 'Gentlemen's Tailoring'. Also, 'Mourning Orders executed on the shortest notice.'

Under the Wantage brick Georgian frontage is a fine Victorian cast-iron shopfront, with striking 'barley sugar twist' window corner posts. Still today, the first floor frosted window panes advertise COSTUMES, MILLINERY, CORSETS, MANTLES. Behind the Georgian brickwork is an L-shaped timber-framed three-storeyed Elizabethan structure. During the Second World War some damage was sustained from the movement of heavy traffic through the Market Place, but this was repaired under the watchful eye of John Betjemen who then lived locally.

Many elderly Wantage people still recall visits to the shop, and its unique character, not least the pneumatic tube system (sadly now gone) which transferred change, notes and sales slips from counters on all floors to the cashiers cubicle.

In 1997, John Arbery, grandson

of the founder, closed the business. Since then the 'Arbery Building Preservation Trust' has been formed, and much support has been forthcoming from individuals and local businesses. An application has been made for a Lottery Grant, and it is hoped that one part of the building will reopen selling Victorian style haberdashery, and another section will be a 1930s theme shop. Remaining portions are earmarked for community use and craft workshops. Details of the project are available from Elizabeth Lambert at Dunholme, Garston Close, Wantage, OX12 7AH.

Not far from Wantage is the village of Charney Bassett where the small watermill has for 20 years been the restoration project of the Vale of White Horse IA Group (working on behalf of Oxfordshire County Council who inherited the building and surrounding land from Berkshire in 1974). As I write there is some cause for concern over the long-term ownership of the building, and the Group is currently having talks with County representatives about its future. The adjacent miller's house has already been sold as a private residence.

In previous notes, I mentioned the efforts being made to ensure future publication of the *Bedfordshire Magazine*, which since 1947 had done much to publicise Bedfordshire's industrial heritage. Sadly, issue 208, Spring 1999, was the last. If you are interested in the local history/family history, archaeology, buildings etc of Bedfordshire, please contact Ann Collett-White, Simla House, 34 Spring Road, Kempston, Bedford, MK42 8LP.

Berkshire IA Group (BIAG), probably the largest and one of the



Today, the appearance of Wantage's Arbery building is unchanged from this engraving

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most active IA societies in the Home Counties region, has had a very positive year, with numerous field excursions and a steam-hauled rail tour organised by 'The Watercress Line'. Probably the Group's main achievement has been the hosting of the SE Region IA Conference at Reading in April.

I would particularly like to hear

from groups or individuals concerned with items of IA interest in Buckinghamshire and Hertfordshire for my next report. However, that does not rule out contributions from Beds, Berks. and Oxon!

Phil Morris

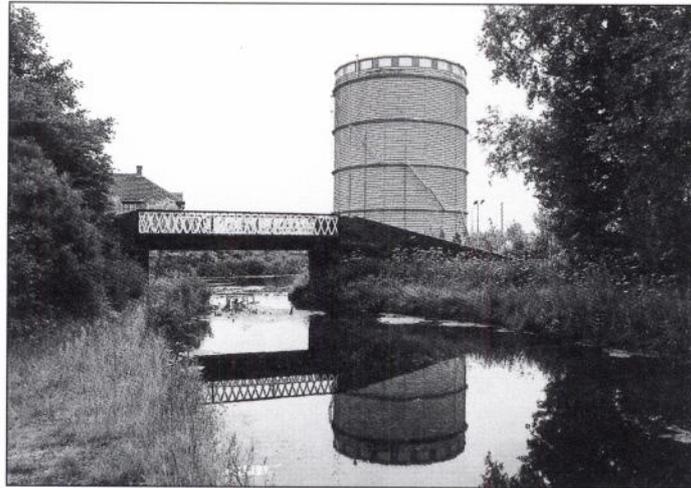
West Midlands

Bank Holiday Monday, 31 May, saw the long-awaited opening of the Midlands Metro, re-introducing tram travel to this region after a gap of some 40 or 50 years. Southbound passengers can join the Metro at a new terminus adjacent to the main shopping area in Wolverhampton, from where it proceeds over an attractive new bridge and then, intermingling with road traffic, along the Bilston Road. After about a mile or so, it swings southwards off the road and joins the trackbed of the former Great Western Railway route from Wolverhampton Low Level to Birmingham Snow Hill, where there is now a rejuvenated station with cross-platform connections to Stourbridge, Stratford-on-Avon and

London Marylebone. There are 21 new stations on the route, as opposed to nine during the British Railways era and, although the ride will give the traveller glimpses of canals, factories and industrial landscapes not seen from the roads, the overriding impression is of just how much industry has disappeared from this traditional 'metal-bashing' area since passenger trains last traversed the line in the early 1970s. Still standing at the time of writing, but about to be demolished, is the huge gasholder at Swan Village, which has been a landmark in this part of the Black Country for generations. A few years ago, English heritage raised the possibility of listing, and possibly preserving, this structure but the suggestion was met with hostility by local residents. The site will now be redeveloped, though another attractive gasholder survives nearby.

A once common sound from the industrial era was silenced forever in Kidderminster where the hooter - or to be more precise, the Bull steam whistle - was heard for the last time on 18 March. It had sounded six times per day since 1882, and was a feature of everyday life not only for the many carpet factory workers, but also for the townspeople as a whole.

There are one or two such items



The Swan Village gasholder, a landmark in the Black Country for generations, which is shortly to disappear
Photo: John Powell

in captivity, however. A steam hooter is sounded at regular intervals at the Blists Hill Ironworks, Ironbridge, to signify to visitors that rolling is about to commence, as happened over the Easter weekend. On the Tuesday after Easter, Fred Dibnah was at the museum to launch and sign copies of his book, which is a spin-off from the successful television series, seen as rather simplistic by some, but welcome nonetheless for spreading the word about industrial archaeology to a wider audience.

In Coventry, Audrey Birmingham, grand-daughter of John Siddeley,

unveiled a plaque at the Parkside Works site on 8 June to commemorate the significant role played by Armstrong-Siddeley in the history of the city's motor industry.

John Powell

Wales

If there was a single event which dominated the news in 1997 it was the untimely demise of Diana, Princess of Wales. More relevantly, 1998 saw the tragic and untimely death from a brain haemorrhage of another Diana - Diana Morgan. More than any other monument, Diana will

be remembered for her association with Greenfield Valley, near Holywell, Flintshire, the early eighteenth-century copper works of the so-called 'Copper King' Thomas Williams. Diana's association with the site went back to the early 1970s when she was employed by the Welsh Development Agency to undertake major excavations as part of the reclamation scheme. This led to the establishment of The Greenfield Valley Heritage Park and her employment by Delyn Borough Council as the park's resident archaeologist.

Greenfield with its complexes of eighteenth-century brick buildings posed a very difficult and expensive conservation problem and being a local authority site, funding problems set in as soon as the initial WDA money had been used up. During the 1980s and early 1990s, Diana was forced to witness the gradual decay of the original copper works buildings, while at the same time other, more populist, developments took place within the Park; such as the St Fagans-like reconstructions of historic buildings from elsewhere in the area and the development of other attractions such as petting zoos, etc.

Local government re-organisation in 1996 eventually led to Diana having a wider responsibility for archaeology within the new Flintshire County Council (north east Wales is the only part of Wales to have local authority archaeologists). At the same time the advent of the Heritage Lottery Fund at last raised the possibility of funding the conservation of the copper works and she was quick to submit an application for the now urgent works.

Tragically, it was at this point in her career with Greenfield at last on the verge of significant funding and with her secure as County Archaeologist, that Diana fell ill and within two weeks had passed away. To add to the loss, her post in Flintshire is not to be filled and may even be scrapped, leaving a large area of north east Wales without in-house archaeological provision. Thankfully, however, the HLF bid was successful and work will start soon to conserve the remains. The completion of the scheme will see a lasting memorial to the life and works not only of Thomas Williams, but also of Diana Morgan. We shall miss her a great deal.

Stephen Greuter

REGIONAL CORRESPONDENTS

Please support your Regional Correspondent by sending relevant material which may be of interest to our readers.

Region 1: SCOTLAND

Dr Miles Oglethorpe, Royal Commission on the Ancient and Historical Monuments of Scotland, John Sinclair House, 16 Bernard Terrace, Edinburgh EH8 9NX

Region 2: IRELAND

Michael Coulter, Department of Environment, Historic Monuments and Buildings, 5-33 Hill Street, Belfast 1

Region 3: NORTHERN ENGLAND

Cumbria, Northumberland, Tyne and Wear, Durham and Cleveland
Fred Brook, Hartland, Redburn, Hexham, Northumberland NE47 7EA

Region 4: YORKSHIRE AND HUMBERSIDE

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

Region 5: NORTH WEST ENGLAND

Lancashire, Merseyside, Greater Manchester and Cheshire
Mrs Edwina Alcock, 5 Friars Walk, Formby, Merseyside L37 4EU

Region 6: WALES

Stephen Greuter, 16 Ffordd Trem-y-Foel, Parc Bryn Coch, Mold, Clwyd CH7 1NG

Region 7: WEST MIDLANDS

Shropshire, Staffordshire, West Midlands, Warwickshire, Hereford and Worcester

John Powell, Ironbridge Gorge Museum Trust, The Wharfage, Ironbridge, Telford, Shropshire TF8 7AW

Region 8: EAST MIDLANDS

Derbyshire, Nottinghamshire, Lincolnshire, Leicestershire and Northamptonshire
David Lyne, 10 Somerville Road, Leicester LE3 2ET

Region 9: EAST ANGLIA

Cambridgeshire, Norfolk, Suffolk and Essex
David Alderton, 48 Quay Street, Halesworth, Suffolk IP19 8EY

Region 10: GREATER LONDON

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

Region 11: HOME COUNTIES

Oxfordshire, Bedfordshire, Berkshire, Buckinghamshire and Hertfordshire
Phil Morris, 71 Van Diemens Road, Stanford in the Vale, Oxon, SN7 8HW

Region 12: SOUTH EAST ENGLAND

Hampshire and Isle of Wight, Surrey, Sussex and Kent

Chris Shephard, Rose Cottage, 22 Ridgeway Hill Road, Farnham, Surrey GU9 8LS

Region 13: WEST OF ENGLAND

Somerset, Avon, Gloucestershire, Wiltshire and Dorset
Mike Bone, Sunnyside, Avon Close, Keynsham, Bristol BS18 1LQ

Region 14: SOUTH WEST ENGLAND

Devon and Cornwall
VACANT

Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review*.

- BIAGscope*, Issues 42 & 43, Spring & Summer 1999
- BIAS Journal*, 31, 1999
- BW Monthly*, March, April & May 1999
- Condensation* (Newsletter of the Westonzoyland Engine Trust) April 1999
- Conservation Bulletin*, Issue 35, April 1999
- FOCUS on industrial archaeology* (SUIAG), 52, June 1999
- GLIAS Newsletter*, 180, 181 & 182, February, April & June 1999
- Greenwich Industrial History*, Volume 2, Issues 2 & 3, April & May 1999
- IA: The Journal of the Society for Industrial Archeology*, Volume 24, No.2, 1998
- The Mundling Stick*, Volume 5, No.1, Spring 1999
- The NIAS Journal*, Volume 24, Part 1, March 1999
- PHEW Newsletter*, No.81, March 1999
- Society for Industrial Archeology Newsletter*, Volume 27, No.4, Winter 1998
- Somerset Industrial Archaeology Society Bulletin*, No.80, April 1999
- Surrey Industrial History Group Newsletter*, Nos. 107, 108 & 109, January, March & May 1999
- Sussex Industrial Archaeology Society Newsletter*, No. 102, April 1999
- TICCIH Bulletin*, Nos. 3 & 4, Winter 1998 & Summer 1999
- Trevithick Trust Newsletter*, No.17, April 1999
- Warp and Weft* (Newsletter of the Stroudwater Textile Trust) Issue 1, May 1999
- Wind and Watermills*, No.18, 1999
- Yorkshire Archaeology Society Industrial History Section Newsletter*, No. 49, Spring 1999
- Southampton University Industrial Archaeology Group Journal*, No.7, 1998, ISSN 0967-3474. Issue containing articles on filming Cornish engines, Petersfield rubber industry, Twyford Waterworks, two pumping stations in the Somerset wetlands, and the rise and decline of dry docks in the port of Southampton.
- Sussex Industrial History: Journal of the Sussex Industrial Archaeology Society*, Issue 28, 1998, ISSN 0263 5151, 2.95. Articles include Brighton Railway Station, construction of South Highton secret tunnels (HMS Forward), Bevendean Isolation Hospital (Brighton), tank roads on the downs, and Hastings early power supply.

Short Notices and Books Received

Ken Andrews, *Mr Bowler of Bath: Victorian entrepreneur and engineer* (Author, 1998) ISBN 0 9534201 0 8, 96pp, 22 ills, £5.95.

The author has used the Bowler Archive to chronicle the activities of the Bowler family from 1872 to the closure in 1969 of their business making mineral waters, as well as the machinery for manufacturing the same. A guide to the items in the Bath Industrial Heritage Centre is also included. (see page 2).

Wayne Cocroft, *Dangerous Energy: The archaeology of gunpowder and military explosives manufacture* (English Heritage, 1999) ISBN 1 85074 718 0, £45.

This book provides for the first time, an overview of the sites and monuments associated with the manufacture of gunpowder, propellants and high explosives for military purposes in Britain. In a generously illustrated text drawing on surviving remains and archive sources it documents site layouts, building types, power sources and communications networks of an industry fundamental to Britain as an independent nation state in an international arena. A gazetteer contains 385 sites.

Brian Law, *Oldham Brave Oldham; A Reflective History of a Determined Borough* (Oldham Council, 1999) ISBN 0 902809490 350pp, 350 ills, £25 hardback or £15 softback.

As part of Oldham's 150th Anniversary Celebrations, this book captures the essence of a town which developed from 40 houses and two pubs 250

years ago to the greatest cotton spinning town and textile machinery manufacturer in the world. The book, with many illustrations, will be the substantive and accessible record of Oldham's past for the foreseeable future.

Susan Lawrence & Mark Staniforth (eds.) *The Archaeology of Whaling in Southern Australia and New Zealand Special Publication No. 10* (The Australasian Society for Historical Archaeology & The Australian Institute for Maritime Archaeology, 1998) ISBN 1 875 495 22 3, 115pp, 107 ills, £22.00.

Whaling has been of great significance in the colonial settlement of Australia and New Zealand. The fifteen papers in this volume are the result of a conference held in 1997 in La Trobe University, Melbourne, sponsored by the AWSANZ Project, The Archaeology of Whaling in Southern Australia and New Zealand. The papers comprise regional overviews, case studies and thematic studies in the archaeology of whaling.

Mary Mills, *Greenwich Marsh - The 300 years before the Dome* (M. Wright, 1999) ISBN 0 9535245 0 7, 240pp, 100+ ills, £9.95 incl. p&p from M. Wright, 24 Humber Road, London SE3 7LT.

With all eyes now on the Millennium Dome, this book charts the diverse industries once seen on the Greenwich peninsula, many forgotten or unrealised by the public. Topics include the early years and development of Greenwich Marsh, Enderby Wharf and the Atlantic cable, colliers and the sea trade, soap manufacturing, patent stone works (an 'immense factory on an ugly and pestiferous marsh'), Henry Bessemer's steel works, Blakeley guns, barge and ship building (including the sailing clipper *Blackadder* in 1870), the great Greenwich Gasworks, and many more small industries.

Planning Policy Statement 6: Planning, Archaeology and the Built Heritage (DoE for Northern Ireland, 1999), 66pp.

Planning Policy Statements set out the policies of the DoE on particular aspects of land-use-planning in Northern Ireland. This publication concerns policies for the protection and conservation of archaeological remains and features of the built heritage. It embodies the Government's commitment to sustainable development and environmental stewardship.

Preserved Power: A Guide to Hampshire's Rural Industrial Past (Hampshire County Council Museums Service, 1999) leaflet, free from Hampshire Museums Service, Winchester.

A useful A3-sized leaflet giving brief details on opening times and access to nine industrial sites, including Botley Mills, Bursledon brickworks and windmill, Whitchurch silk mill, Chase Mill and Twyford waterworks. All the sites offer and encourage interest in their educational resources.

Book Launch

Surrey Industrial History Group is launching a new book, *Surrey's Industrial Past*, at Dorking Christian Centre on Friday 29 October 1999. Everyone is invited to meet the authors and members of the group before a brief presentation about the book at 8pm. The book will be on sale at £12.95 at the event. Copies can be ordered from John Mills, 35 Trotsworth Avenue, Virginia Water, GU25 4AN, enclosing a cheque for £12.95 payable to 'SIHG'.

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**27-29 August 1999
THE ENVIRONMENTAL
ARCHAEOLOGY OF
INDUSTRY**

at the University of Surrey, Guildford, annual conference of Association of Environmental Archaeologists. To focus attention on environmental aspects of past industry - including any process involving the use of organic raw materials - aiming to bridge the gap between industrial and environmental archaeology. Papers are invited on aspects of the bio- and geoarchaeology of all kinds of industry. Please send enquiries to Patricia Wiltshire (p.wiltshire@ucl.ac.uk) or Peter Murphy (p.l.murphy@uea.ac.uk).

**7-10 September 1999
PRESERVATION OF THE
ENGINEERING HERITAGE:
GDANSK OUTLOOK 2000**

the third conference on industrial history to be held at the Technical University. Their home page is at: <http://www.pg.gda.pl/~pehgo2000/> For details contact International Conference Preservation of the Engineering Heritage - Gdansk Outlook 2000, Secretary, Waldemar Affelt, Wydział Budownictwa Lądowego, Politechnika Gdanska, ul. G. Narutowicza 11/12, 80-952 Gdansk, Poland.

**10-17 September 1999
AIA ANNUAL CONFERENCE
1999**

at Chatham, Kent. Details are given on the AIA News page inside this issue.

**22-28 September 1999
ECONOMIC STRUCTURE IN
CHANGE, INDUSTRIAL
HERITAGE IN DANGER**

at Budapest and Miskolc, conference which will focus mainly on mining and metallurgical heritage, with support of TICCIH. For details, contact Gyorgyi Nemeth, University of Miskolc, Department of Hungarian History, H-3515 Miskolc-Egyetemvaros, Hungary, e-mail: bolverus@gold.uni-miskolc.hu

**2 October 1999
WANHS INDUSTRIAL
ARCHAEOLOGY
CONFERENCE**

at the Wharf Theatre, Devizes, organised by the Wiltshire Archaeological & Natural History Society, topics including museums, canals, limekilns, civil engineering, wind engines and street furniture. Details from IA Symposium, Devizes Museum, 41 Long Street, Devizes, Wiltshire SN10 1NS.

**9 October 1999
THIRD WATERWAYS
HISTORY CONFERENCE**

at Birmingham Central Library, organised by the National Waterways Museum and the Railway & Canal Historical Society, to follow up the progress made with previous conferences and to concentrate on steps leading to publication alongside case studies and histories. For further information, booking forms and offers of papers, contact Judy Wootton, The National Waterways Museum, Llanthony Warehouse, Gloucester Docks, Gloucester GL1 2EH. ☎ 01452 318053.

**14- 16 October 1999
THE ARCHAEOLOGY OF
INDUSTRIALISATION**

at Bristol University, joint conference organised by the AIA and the Society for Post-Medieval Archaeology. Details are given on the AIA News page inside this issue.

**16 October 1999
EMIAc 58: THE
NORTHAMPTONSHIRE
FOOTWEAR WORKER**

at Avenue Campus, University College, Northampton, to explore the social dimension of the footwear industry in Northamptonshire, with afternoon exploration of the footwear

landscape and products. Hosted by Northamptonshire IA Group and IA section of University College, Northampton. For details, send SAE to: Mrs Susan Ranson, Gordons Lodge, Ashton, Northampton, NN7 2JP.

Information for the diary should be sent directly 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. Please ensure details are sent in if you wish your event to be advised.



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Editor: Dr Peter Stanier

Published by the Association for Industrial Archaeology. Contributions should be sent to the Editor, Dr Peter Stanier, 49 Breach Lane, Shaftesbury, Dorset SP7 8LF. News and press releases may be sent to the Editor or the appropriate AIA Regional Correspondents. The Editor may be telephoned on 01747 854707.

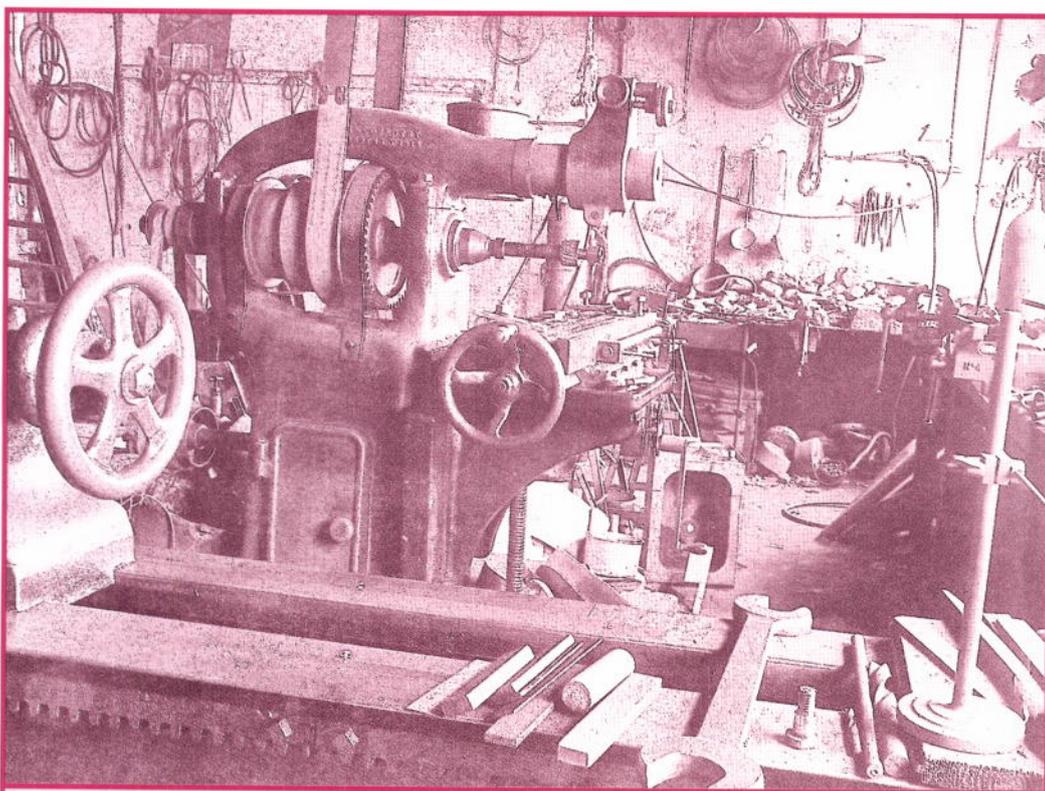
Final copy dates are as follows:

- 30 March for May mailing
- 30 June for August mailing
- 30 September for November mailing
- 30 December for February 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 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. The AIA publishes an annual Review and quarterly News bulletin. Further details may be obtained from the Liaison Officer, AIA Office, School of Archaeological Studies, University of Leicester, Leicester LE1 7RH.

☎ 0116 252 5337 Fax: 0116 252 5005.

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



General engineering machine shop at J. B. Bowler's Corn Street Works, in 1969. A photograph from the Bowler Collection (see page 2)
Photo: Bath Industrial Heritage Trust