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INDUSTRIAL ARCHAEOLOGY NEWS 104 Spring 1998

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TICCIH 1997

John Crompton

The 1997 Conference of The International Committee for the Conservation of the Industrial Heritage was hosted by Greece, in Athens and Thessaloniki. Your representative reports on the events.

Mid-afternoon, and the heat hits hard as soon as you reach the 'plane door; very different from a rainstorm in the half-light of an Edinburgh early morning. Athens at the end of June, a half-hour bus scrum away, is even hotter.

The Conference timetable begins with registration on a Sunday morning in the Centre for Neohellenic Research where there's an exhibition of historic scientific instruments, a very full satchel of programmes and leaflets to read, and lots of people to meet if your language skills are up to it. Eventually, 100 delegates gather in the lecture theatre for a brief welcome from the Presidents of TICCIH, Louis Bergeron, and of the Greek Section based at the Centre, Vassilis Panayotopoulos.

The Athens part of the 1997 Conference concentrated on visits, first to metal mining sites at Agia Triada in the province of Lavriotiki. Industrial archaeology goes back a long time in this part of Greece, to opencasts, mines and ore-processing sites whence the ancient city states collected their wealth of silver. As in later times, ore processing depended on water, a very scarce commodity in this baking limestone landscape, and the arrangements for storing water in rock-hewn cisterns are impressive. In the afternoon, after an address of welcome and a sumptuous buffet lunch provided by the Municipality of Lavrion, we visited the extensive site of the French Mining Company founded in 1875 and closed in 1989. Many of the buildings and their machinery survive, together with the complex of flues running to a hilltop chimney. Now the central buildings are being converted to a 'technological-cultural park' annexed to the National Technical University of Athens, an enormous project which demonstrates Greek determination to do something with their industrial heritage for present and future generations. The day ended with 'real' Greek archaeology, at the Temple of Poseidon overlooking a shimmering Aegean Sea as it has done since the 5th century BC, after which the whole party was entertained to another sumptuous buffet meal by the Greek Section of TICCIH.

Monday found delegates heading for Piraeus, Athens' port for many centuries and now an extensive industrial zone which was viewed from the afterdeck of a landing-craft type ferry. This day's welcome and lunch was provided by the Port Authorities, after which we toured the older industrial areas (cameras not welcome) and visited the battleship *G Averoff* built at Livorno in 1911 and armed at Elswick on the Tyne. Not only are all the guns and loading equipment still in place, so are the four compound engines and the 23 coal-fired boilers.

Tuesday required an early start for the northwards journey, a long and hot 400 miles to Thessaloniki. On the way, we visited the port of Volos, which has a tobacco warehouse, earthquake-damaged but now

cleverly restored and converted to an education and training centre; and an extensive and still equipped tile works which is to be restored as a 'cultural centre', demonstrating again a commitment to adaptive re-use for community benefit. Volos is served by railways of standard and metre gauge.

Thessaloniki, Greece's second city, is a fascinating place, the geometrical streets of the modern town laid out after a huge fire in 1917 in the old town below the hilltop citadel. Layers of historic cultures, Roman, Byzantine and Jewish (Salonica was one of the few cities in Europe where Jews were encouraged), appear between the modern buildings, springing from the lower levels which mark the ground surfaces of earlier centuries. 'European City of Culture' in 1997, the TICCIH Conference had been built into the summer's cultural programme - Millennium committees please note!

The rest of TICCIH 97 was based in the Conference Centre at Thessaloniki's International Expo site, a fact proclaimed by a 3-metre high poster at the entrance. The list of 160 delegates showed 24 countries from Canada to Uruguay, with Japan and Russia well represented. Britain fielded a strong delegation reflecting the diverse groups and interests which make up IA in Britain - from the Royal Commissions, English Heritage, Historic Scotland, Ironbridge Institute, Science Museum, Trevithick Trust and of course the AIA. It's interesting to note the parts of the world which weren't represented: Africa, India, Australia and, perhaps predictably, China; is distance the only factor?

The 'conferring' part of the conference began on the Wednesday morning after more welcomes, including one from the Minister for the Aegean. The major theme, Maritime Technologies, springs from the timeless Greek relationship with the sea, and the foundations of that relationship was expertly brought home in John Robinson's keynote address. During the three days there were nearly 80 papers from 85 delegates, with Britain contributing strongly to the sometimes parallel sessions.

In the first session on Maritime Heritage Recording Projects, Keith Falconer (RCHME) spoke on 'Recording English ports and docklands' and Terry James of the Welsh Royal Commission on 'The sea and industry - approaches to an integrated computerised database'. Stuart Smith contributed a paper on 'Global Communications - a Cornish view' to a session on Maritime Heritage Research and Documentation, and Mark Watson (Historic Scotland) joined Dimitra Babalis to explain 'Leith's dockside transformation through warehouse conversion'. John Crompton (National Museums of Scotland) contributed 'Coal exporting ports of Fife' to a session on Seaports and their Identity, and a session on Maritime Constructions Technology heard Michael Stratton (University of York) speak on 'Construction technology and 20th century maritime installations'.

COVER PICTURE

The restored flax scutching windmill at Heule near Kortrijk in Belgium (see Preetjes Mill, page 10)

Photo: Marilyn Palmer

ADVERTISE IN IA NEWS

See page 15 for details

A secondary theme, Industrial Landscapes in Mining Areas, was continued from the Montreal Conference in 1994. Again, Britain made a strong contribution. Stephen Hughes (Welsh Royal Commission) spoke on 'Components of the mining landscape in Wales', Anthony Streeten (English Heritage) discussed 'Managing change in the mining landscapes of England', and Richard Williams talked on 'The treatment and preservation of Cornwall's historic mining landscape'.

Presenting and listening were both subject to risk, the former from sophisticated projectors which wouldn't respond, the latter from simultaneous translation which frequently lagged well behind, especially when French was being translated to English through a middle stage of Greek. Timing went haywire, and any chance of discussion quickly went overboard, and the tasks of Neil Cossons chairing a plenary session and session chairpersons summarising the contributions of their participants was near impossible.

Whilst the days were rather losing their way, the evenings took delegates to wider activities. One evening was devoted to a boat tour round the harbour, disembarking to view an exhibition, 'Risks at Sea'; then a short walking tour of the port buildings leading to another sumptuous feast complete with pig-roast, music and lessons in Greek dancing. Another evening took us to the city flour mill, now a thriving night-club with exhibition space amongst the surviving roller equipment. Less successful was a visit to the Industrial Museum of Thessaloniki housed in a modern industrial unit, not through any fault of the museum or of the special exhibition opening planned to honour our visit, but because of the mosquitoes which devoured us!

Saturday was devoted to two all-day excursions, both relaxed affairs with long periods of forced inactivity. The inclusion of the tombs of the Macedonian kings on an IA day (for those who had not been beguiled by the promise of a steam railway ride) was unexpected. The core of the non-railway excursion was provided by visits to Naoussa and

Edessa, towns which stand on the edge of cliffs over which water tumbles in spectacular display, and both are restoring and adapting their mills for community cultural use. Inevitably there was the municipal hospitality - local fruit served as we explored Naoussa's former woollen mill, once driven by a horizontal wooden turbine; lunch on a shady open-air terrace on the cliff edge; and an evening buffet with the workers on the Edessa Water Park project and their families. Edessa had a complex of small mills at the head of Greece's biggest waterfall, drawing power from the water several times to grind grain, crush sesame seeds, saw wood etc., and these are being stabilised and restored to form a leisure and cultural park. A two-stage glass lift, hurriedly completed for our visit and behaving temperamentally (it worked by oil hydraulics, not water!) leads down the cliff to a turbine-driven rope works, disused but with all its machinery.

Amongst all this activity came TICCIH's organising meetings, of national representatives, of the Board, and the general assembly. Your representative was kept quite busy, presenting and discussing Britain's invitation for TICCIH 2000 and being co-opted to the Board for a three-year term. Between now and the millennium there will be 'interim' conferences in Cuba (1998) and Hungary (1999), and meetings in Belgium and Germany were also proposed. A Russian invitation to the Central Urals was accepted for 2003, and thoughts extended as far as a possible Japan venue for 2006. More immediate is a proposal, widely welcomed, to transform TICCIH into a subscribing membership organisation, beginning with the 1997 conference delegates who were deemed to have paid their first year's subscription; this will depend on a membership secretariat based at Le Creusot and the production of an upgraded newsletter (come back, *World Industrial Archaeology*).

All this enjoyment is tempered by the realisation that it's Britain's turn to host the next in the main, triennial, series in the Millennium year - which is a

good reason why TICCIH 2000 should be the best ever. Another reason is Britain's claim to have 'invented' IA in the first place, though an international perspective does bring the claim into dispute; but the best reason is that we should have the best resources, of achievement in recording, in monuments preserved, and in humans who enthuse and practice IA. It will depend on us all, of course, from all our diverse institutions, societies and interests, to pool resources and pull together. The AIA, the Science Museum and English Heritage have joined forces as joint lead sponsors, and many other groups have expressed their support. Dates are in place, beginning August 30 in London, providing a choice of regional tours to Cornwall, Wales and Scotland from September 3 to 7, and a final evening together in Manchester so that delegates may join the AIA's own conference from August 8.

Memories of TICCIH 1997 are rich and varied: of a widening of perceptions, of new friends and interests made, of days far too hot and far too much food; of the tremendous welcome from Greece in general and the Greek Section of TICCIH in particular; of the depth of organisation and the high quality of publications. Some aspects are rather different from our experience at home - the frequent and unstinting hospitality at municipal expense, for example. The key is, of course, that an international conference was being seen as important, significant, useful to those who were visited. Delegates were being used, to enhance the standing of industrial archaeology and heritage perhaps; to encourage and enthuse the municipalities who are at the threshold of great cultural re-use projects. One felt that the Conference was a valued event!

Will TICCIH 2000 be a valued event in Britain? Will it enhance the standing of industrial archaeology? Will it enthuse government perhaps, or commercial companies, or developers, to put more thought into using Britain's industrial heritage for present and future generations? Will it provide such a welcome and such hospitality as we found in Greece - a hard act to follow! The answers lie within us all.

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The load carrying capacity of the Belfast truss roof

M.H. Gould and F.R. Montgomery

Whilst the timber Belfast roof may be regarded as an historical structural form, many such roofs still exist. However, a considerable number have been demolished over the last 25 years, sometimes, apparently because no method exists which permits a rigorous analysis of the supporting truss. This article reviews the known loading characteristics and reports on full size load tests carried out by the authors from Queens University of Belfast.

There appears to be no known record as to when the characteristic truss of the Belfast roof was first made. The earliest reference is an advertisement in *The Dublin Builder* for 1 October 1866. The fan lay-out of the bracing of the trusts can clearly be seen. At this stage, the roof was described as 'a circular roof for great economy and clear wide spans' (up to 100 feet).

In this truss the bracings were laid out so that all timbers intersected at a point below the end support (one half span down). Small scale model tests undertaken by us suggest a 10 per cent reduction in material when compared to a truss with parallel bracing. However, there must have been considerable waste if the timbers below the cord were cut off, so a simpler method of construction was needed.

This did not come until the early 1900s when a competitor to the original supplier (McTear & Co.), D. Anderson & Sons, employed a Belfast firm of architects to test load a different form of construction. In this truss, a wooden block was fixed at each purlin point on the top cord. By setting two braces pre-cut to 45 degrees either side, a right angle was formed at all the purlins and a less exaggerated fan of braces was formed. It was Andersons who promoted the term 'Belfast roof' from this time.

Earlier advertisements show that Andersons had used a parallel braced truss before this date, what they described as a latticework truss. Clearly it was perceived that some structural advantage derived from the fan arrangement.

It is known that three load tests to failure were conducted in 1906. Two trusses were set up at ground level 5 feet apart (normal spacing is 10 feet) and a section of purlin supported sarking was added to overhang 2 feet 6 inches either side. Loading was undertaken by adding bricks evenly over the roof. The results are given in Table 1.

It will be seen that the load per area is remarkably consistent regardless of span. Since the member sizes of the trusses go up in stages with span this might be expected if the proper rules for member selection are applied.

Truss	Span (ft)	Failure (lb)	lb/sq ft	def.
1	29.1	24,217	41.63	3"
2	35.3	30,206	42.84	3.5"
3	49.3	35,438	35.97	5"

Table 1. Load Test conducted for Anderson & Sons in 1906

We were given the opportunity to test two full-sized roofs in situ. The trusses were laid up like the Anderson trusses, although the site was that of the former Baltic Timber Co. in Belfast. Four different spans were available, one of which was in a high building of large span and was thus beyond what we could test. Testing was undertaken by suspending plastic oil tanks from the roof over one truss by wire ropes. A metered supply of water was run into each tank in turn. The results are shown in Table 2.

Truss	Span (ft)	Load (lb)	lb/sq ft	def.
4	22	13,415	61	2"
5	35	13,585	39	3"

Table 2. Load tests on two trusses at Baltic Timber Co., Belfast

It was reported that all of the trusses tested in 1906 failed by the braces punching through the pair of timbers which go to make up the bottom cord. Truss no. 5, which failed at a remarkably similar load, failed by a complete fracture of the truss about 4 feet from one end.

It had been observed before testing that the individual members in truss no. 4 seemed to be too thick. This was borne out by the much higher load which it carried. It failed by some local cracking of the timbers at one end resulting in buckling and purlin failure at the opposite end.

In addition to these load tests, models have been made and tested and analysis undertaken by computer, all of which suggests no advantage under a uniform load if a fan braced truss is used. We are of the opinion that the original designers had in mind the possibility of asymmetric loads arising, for

example, from a wind on one side, but we have yet to work out a way in which we can apply such an asymmetric load to a model truss and be sure that the load is evenly carried.

All of the tests undertaken suggest that a failure of 40 lb/sq ft uniform over the roof is an acceptable design load for trusses laid up in accordance with Anderson rules. Their trusses went up to spans of 150 feet (they claimed) but none of this length is known. The normal range is from 10 to 100 feet.

The Belfast truss roof was once very widespread. In Ulster, many factories had one or two buildings with such a roof, especially those used for finishing processes. The wood/felt roof was considered to be 'warm' when compared with slates and condensation from steamy processes did not drip from the trusses, thus ruining the product. With the decline of many small factory units, most have now disappeared.

Both companies (and there were others in the field), but especially Andersons, worked in mainland Britain and listed several addresses there. It seems, however, from examples of work listed for early this century, that most examples were to be found near big ports, where small timbers were easy to come by. Birmingham, where the Warwickshire Industrial Archaeology Society has located several examples, appears as an exception.

The big expansion of the air services in 1916/17 resulted in many hangers being built with Belfast truss roofs. Most all-wood hangers were sold off in 1919/20 but a number with brick walls remained, with a significant proportion still on RAF stations by the start of the Second World War. Those on sites in the south easily burnt down in the 1940 bombing (one was blown up during the making of the film 'Battle of Britain'). However, some still remain and a small number are listed.

As an example, one can cite Bracebridge Heath, Lincoln. This had the first hanger arrangement, three two-bay hangers (one per flight) and a single. The later arrangement was two three-bay hangers (one

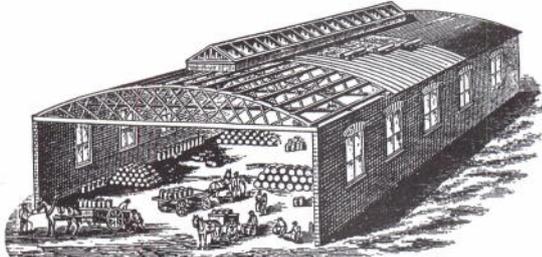
THE COUNTRY GENTLEMEN'S CATALOGUE, 1894. 269





M'TEAR & CO., LIMITED,

Felt Factory, Sawing and Planing Mills,
117, 119 & 121, CORPORATION STREET, BELFAST.



Circular Felt Roofs erected, without central supports, up to 100 feet span.

McTear & Co. Ltd.'s advertisement from The Country Gentlemen's Catalogue, 1894

per training squadron) and a single. In both cases the single was the maintenance hanger. At Bracebridge Heath, one is demolished, one now has brick ends, one is entirely covered in modern sheeting and one is in its original state and listed. However, the owners have been trying to get this listing removed and to demolish.

Metal trusses appeared by 1918 and hanger development then continued in metal. Many small buildings, especially in Ulster, were built in the 1930s, including builders' yards (where perhaps the truss was something of an advertisement as well as practical), garages and farm buildings, the last continuing for the longest. However, the widespread use of corrugated iron led to great simplification in construction and the Belfast truss then fell out of use.

The greatest concentration is to be seen at the Hendon RAF museum. Three hangers have been imported from other sites and trusses of both fan and parallel bracing arrangements can be viewed.



A 60-foot span Belfast truss roof at Sligo, Republic of Ireland

Photo: M. Gould

The Newcastle pre-conference seminar

Marilyn Palmer and Peter Neaverson

The AIA has continued its successful series of pre-conference research seminars, the most recent of which was held at Newcastle upon Tyne on 5 September 1997. The seminar incorporated the urban theme of the seminar planned for Leicester in December 1996 which had, for various reasons, to be cancelled, but also included papers on current research and thinking in industrial archaeology.

The seminar was opened by our Conference Secretary, David Alderton, with a paper based on research for his English Heritage book *A teacher's guide to using industrial sites* (1995). Entitled 'Industrial museums and heritage sites - an aid to, or a distraction from, true historical understanding?', David argued that most industrial museums and heritage sites seek to attract school groups on the grounds that they can help increase pupils' understanding of industrial change and past working conditions, but questioned how far the experience they offer is an illusion which may obscure rather than illuminate the past. This encouraged some active debate!

David was followed by Ray Riley of the University of Łódź, who organised the very successful AIA visit to Poland in 1996. He has been engaged on a survey of the heritage of the Upper Silesian Coalfield for the Upper Silesian Cultural Heritage Centre and described the bureaucratic procedures which frequently hindered his work. The coalfield is by far the largest in Europe outside the former Soviet Union and many late nineteenth-century structures were retained as a means of cutting costs before the massive decline in the last decade. Despite the association of mining with communism, the

importance of the coal industry in the history and economy of Upper Silesia has been accepted by both central and local governments, and there is hope that some structures will be retained: the coalfield displays a considerable range of pit headgears.

The next paper returned to the British scene with a progress report on the RCHME's Furness Project on the iron and related woodland industries of south-west Cumbria. Mark Bowden and Ian Goodall of the York office described the joint project between their archaeological and architectural teams. Four of the eight charcoal-fired blast furnace sites established between 1711 and 1747 retain their furnaces, charcoal and ore stores, and housing, but the variety of arrangement and diversity in size require

explanation. There is also a need to relate blast furnaces to finery forges and, if possible, to charcoal production: considerable survey work has been undertaken on charcoal pitsteads and related woodland industries. The project highlights the need to relate industrial monuments to their topographical and cultural contexts.

Marilyn Palmer, who convened the seminar, had requested papers on the theory of industrial archaeology and took up the challenge herself in a paper entitled: 'Where are the people? Social context in industrial archaeology'. She argued that industrial archaeologists have been so concerned with identifying and classifying industrial structures to ensure their survival that they have frequently failed



Headgears at Siemanowice Mine, Katowice, Poland, the scene of Ray Riley's surveys and subject of a forthcoming article

Photo: Marilyn Palmer

to utilise their evidence in a normal archaeological manner, i.e. treating the physical remains as evidence for social change and development. Yet the majority of sites in the industrial period provide structural evidence for the dramatic social upheaval and redefinition of the class system which accompanied the process of industrialisation. She invited industrial archaeologists to move beyond their normal functional approach and look for the cultural meaning of our landscapes, sites and structures. Her research student, Steve Dobson, formerly of Nene College but now an Experimental Officer in the Department of Archaeology in the University of York, described his regional survey of water power sites in the Nene Valley. He argued that in order to record a proportion of the sites, and develop an understanding of spatial trends, the methods by which sites are sampled are particularly important. His research attempts to explore ways in which differing sampling strategies can be employed in data collection and how recording/data retrieval methods can be developed in order to cope with the diverse nature of industrial archaeological survival.

The afternoon session took up the urban theme, beginning with a challenging paper from Tim Smith of GLIAS on the problems associated with thematic studies of London's industries. Although in the nineteenth century London was the largest manufacturing city in the world, thematic studies of the capital's diverse industries are hampered through a lack of surviving sites. He concentrated on three examples, vinegar manufacture in Southwark, Lambeth and the north of the City; the important London lead manufacturing industry, which has left little for the industrial archaeologist to discover; and hydraulic power, which seems to have left

extensive remains, although in fact less than 10% of the pumping station buildings are still extant. He suggested that similar situations exist for other once important London industries.

Dr R. A. Otter and Peter Cross-Rudkin described the work of the Institution of Civil Engineers' Panel for Historical Engineering Works in the recording and assessing of the engineering heritage. Their Panel was established 25 years ago and has, to date, identified and recorded some 2,000 surviving civil engineering works of historical interest and has also become involved in some of the conservation, preservation or re-use debates which have related to a number of these works. They described the standard recording forms which lead to assessments of the historical value of structures with which they are concerned, and argued that the general principles could be applied equally well to industrial sites, taking forward some of the contributions to the conference on Managing the Industrial Heritage, held at Leicester University in 1994.

Derek Brumhead from the New Mills Heritage and Information Centre was concerned with the regeneration rather than the recording of industrial sites. His case study was the Castlefield basin in Manchester. Since 1988, the Central Manchester Development Corporation in partnership with the local authority and others has used nearly £80m of funds from government urban aid, the European Regional Development Fund, English Heritage, the Millennium Fund, and private investment to carry out a programme of reconstruction and regeneration of the former run-down industrial heritage. Undesirable industries have been relocated, dereliction removed, canal basins and their warehouses reinstated and refurbished and railway viaducts and their arches

cleaned up. In their place have appeared new footpaths and bridges, adapted canal basins and warehouses, new housing and hotels, a visitor centre, an events arena, a pub, and a YHA and YMCA. This mixture of conservation, adaptive re-use and newly introduced alien elements, catering for visitors, residents and historians alike, raises certain questions about the planning strategies for such areas.

Stephen Hughes from the Welsh Royal Commission returned to the theme of social archaeology with his contribution on Swansea. He argued that the industrial heritage cannot be understood without consideration of the social provisions for the workforce in terms of housing, chapels, schools, etc. and showed numerous plans of industrial communities in the Swansea area. His work will be published in a forthcoming book from RCAHMW.

Amber Patrick, AIA Secretary and adviser to English Heritage on maltings, looked at their urban context. She argued that malthouses are often considered only as an aspect of the brewing industry or as buildings found in a rural landscape, but they were equally an important part of the urban scene, whether they were burgage plot maltings or large industrial complexes. She examined the extent to which malthouses still survive in our towns and cities and looked at the difficulties encountered in trying to identify them, particularly after adaptive re-use.

This seminar once again demonstrated the vitality of the discipline in both the volunteer and professional sectors. We hope that readers of *IA News* will feel inspired to contribute to the pre-conference seminar in South Devon which will be held on Friday 4 September 1998. Please get in touch with the Editors of *Industrial Archaeology Review*.

A long weekend in Ulster

Alan Birt

A successful study tour was arranged by the AIA from 29 May to 1 June 1997. Local arrangements and tours were undertaken by Michael Coulter (Northern Ireland Environment & Heritage Service), ably assisted by Fred Hamond and Cormac Scally. All three are members of the new Industrial Heritage Association of Ireland (see IA News 98) Travel arrangements were made by Paul Saulter.

On the Thursday morning our small group assembled at the Environment & Heritage Service HQ in Belfast for the official welcome and reception. From here we travelled to the Ulster Museum, where the Director introduced us to the Industrial Heritage collection before we had a free range around the vast assembly of IA exhibits from steam engines to soft-drinks materials. After lunch in the museum restaurant, we visited the Ulster Folk Museum. This has a variety of interesting buildings re-assembled to form both a village and 'isolated' units out in the countryside (although only a few hundred yards away). These museum visits gave us the requisite flavour and background for our subsequent journeys around Northern Ireland.

Our coach took us to Donaghadee Harbour, designed by Rennie. Built of stone, this fine and elegant but solid construction was used as the Irish end of the cross-channel ferry from Portpatrick in south-west Scotland. It is now listed. A trip along the coast brought us into former windmill country. Records show there were over 100 windmills in Co. Down and probably the second largest concentration in the British Isles, but Ballycopeland is now the only original windmill still operating in Ireland. Built in the 1700s, it was taken into State care in the 1930s. It has been carefully restored and is maintained in good working order: we were given open access to explore parts not normally available to the general public. A pleasant journey to our hotel at Newtownards for dinner, followed by Michael Coulter's lecture giving a general introduction to Northern Ireland and its industrial history, finished our first day.

The Friday morning started with a coach trip to the Lower Bann Navigation which links Lough Neagh (the largest lake in the British Isles) with the sea. It is one of two stretches of waterway still in use in Northern Ireland. Following coffee at the 'Salmon Leap', we viewed the adjacent lock, weir and flood control gates; your reporter lives in Suffolk and was pleased to see a plate on the control gates stating:

'Made by Ransomes of Ipswich'. Bushmills Distillery was our next stop. Established in 1608, it claims to be the oldest in the world! We saw a functioning waterwheel, some old warehouses and a museum of old agricultural equipment before our tour of the distillery with a sample to try at the end. Apparently, Irish whiskey is distilled three times whereas Scotch is distilled only twice.

Being so near the famous Giant's Causeway, we diverted from industrial history to look at this, the only World Heritage Site in Ireland. However, we did see some of the coal seams in the cliffs adjacent to Ballycastle on our way. In the past, these had been a source of coal for Ireland. After lunch in the Causeway Hotel we looked at various relics of the local industrial revolution which took place at Ballycastle in the mid-1700s following the exploitation of the local (but poor quality) coal. The harbour, a glass cone, an ice house and Marconi's base for his early experiments in radio were also of interest.

We travelled along the Antrim Coast Road, a very scenic route but nonetheless of industrial interest with small harbours, bridges, a wagonway incline and quarries at Glenarm for limestone extraction and lime export. After dinner at the Londonderry Arms Hotel we proceeded to Carrickfergus Gasworks and

examined many interesting items of gas-making equipment, especially an extensive range of horizontal retorts. It was a long day and most of us went to bed without even a short visit to the bar!

Saturday started at Lisburn where we toured the recently opened Linen Heritage Centre, but we were admitted before the general public. The industrial history of the Ulster linen trade was well displayed and we saw a practical demonstration of the wet-spinning of linen thread with a spinning wheel. On then to visits at the Lagan Canal and Moira Station, the oldest surviving station in Northern Ireland and now in State care. Adjacent to the station, the main line to Dublin crosses the canal on a very fine skew bridge.

We then journeyed to Joseph Orr's Mill which has an impressive stationary steam engine and a range of textile-related machinery, mainly from the linen industry. On the way we saw parts of the Ulster Canal, the least successful commercially and with the shortest active life of any canal in Ireland. The border with the Republic is about halfway along its length so it now straddles two countries. A substantial bridge and lock has been restored next to Joseph

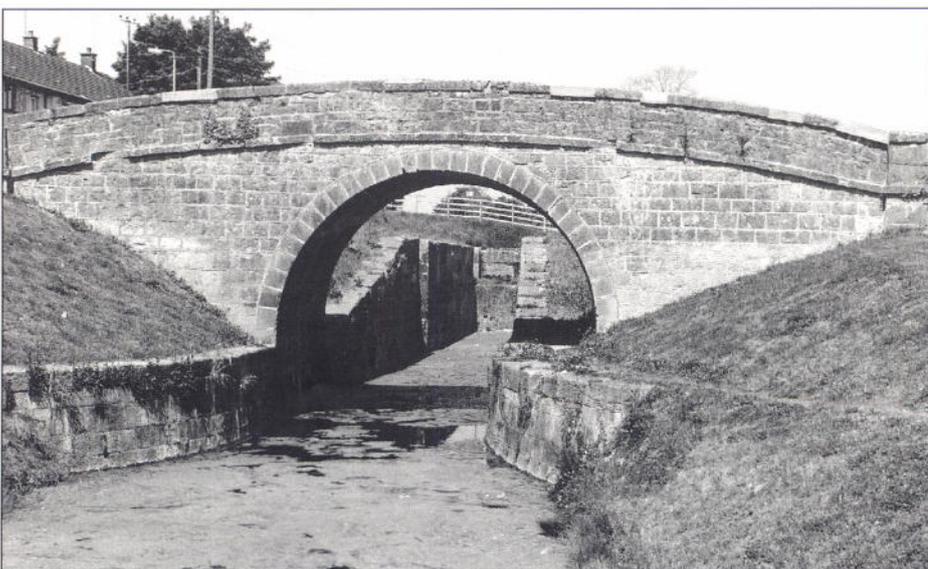
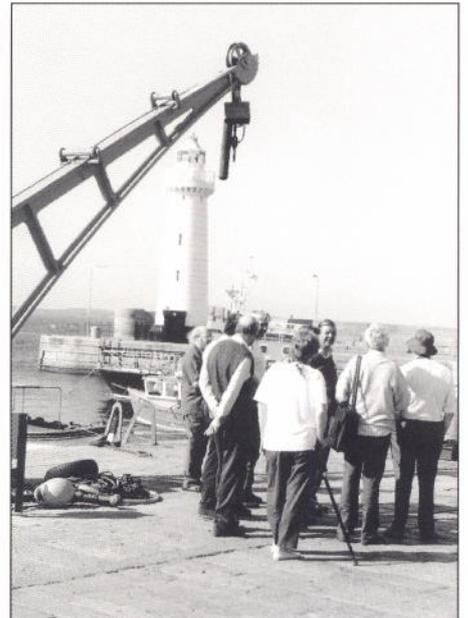
Orr's Mill.

Following a light lunch at the mill we looked at several stretches of the Newry Canal, built in the 1740s. Many of the locks and bridges were rebuilt in the early 1800s and are still in good condition. But the main afternoon attraction was a wonderful character named Eugene McConville, an elderly man who spent all his working life in the linen industry at Scutch Mill. He demonstrated the scutching process which separates the long fibres in the flax stalk from the surrounding unwanted debris. It was a fascinating procedure using very old and crude machinery driven by a waterwheel. Eugene was such a tremendous character that the trip to Ireland would have been worthwhile just to meet him and hear his delightful explanations of the stages in linen production. On our way back to the hotel we saw the large and well maintained Andrew's Spinning Mill, now closed but being redeveloped as a retail complex. After dinner, we heard a lecture by Ian McQuiston, Director: National Trust for Northern Ireland.

On Sunday morning we visited a lead mining area at Whitespots between Newtownards and Conlig to the east of Belfast and saw the surface remains of

beam engine houses and chimneys, mine shafts (now capped) and the only known ore-crushing windmill in Ireland. These sites are now within the area of a recently established country park. After lunch we looked at the modern industrial development and the sites of some former industries in the Lagan side area of Belfast. The new Lagan Weir and Lookout Post were also visited.

An exciting and memorable final site on our tour was Patterson's Spade Mill where we saw spades being made in the traditional way. Square cut timber was fashioned into handles by using an ingenious but quite simple machine and the blades were hammered out using appropriate old machinery including a trip hammer. What a splendid finale this event was! It was a good value-for-money long weekend in which we covered a great variety of industrial topics: how fortunate we are to have the AIA to organise such events. It was a pity though that only 11 people joined the group. Those who did not enrol certainly missed a notably good programme. Two of the group stayed on to join a second weekend event, a tour of the Province organised by the Railway & Historical Society.



*Above Left:
Trying to keep in a straight line outside the malthouse at Bushmills Whiskey Distillery*

*Above Centre:
Retired worker Eugene McConville in full explanation at the Scutch Mill*

*Above Right:
The group at Donaghadee Harbour, designed by Rennie. Note the lighthouse in background*

*Left:
Bridge on the Ulster Canal by Joseph Orr's Mill*

All Photos by Amber Patrick

AIA on the Web

The AIA now has a site on the World Wide Web. It was felt important that we should have a presence on this growing medium and our pages are a start at informing the world about AIA. We have already had a membership query so that proves it works!

For those able to access the web, the URL is www.twelveheads.demon.co.uk/aia.htm. Space is provided by courtesy of Twelveheads Press.

We want to add a page of links to other sites of allied interest, so if your society or organisation has a web page, or if you know of suitable pages, please let Michael Messenger know. He can be e-mailed at mjm@twelveheads.demon.co.uk.

New address for the Review

Because of changes at the University of Leicester (see page 15), the editors of *Industrial Archaeology Review* are no longer in the Department of History. They now have a new base in the School of Archaeological Studies, with which they are very pleased. Please address all correspondence about the *Review* to them in the School of Archaeological Studies, University of Leicester, LE1 7RH.

Industrial Collections in crisis?

The AIA's annual affiliated societies working weekend at Ironbridge is fast approaching. This year's theme is the future of the nation's industrial collections which are under threat from the closure of museums or shrinkage of funding as a result of recession. Museum closures and the threat to the long term of both public and private collections are not a thing of the past, despite the advent of lottery funding. Birmingham's Museum of Science and Industry, for example, has closed to the public (see page 12) and the future of its collections will be discussed during the weekend. To what extent are these problems the result of over-enthusiastic collecting with little thought of the future? Are we now turning our backs on those who struggle to ensure their long term future? What are we doing to protect the collections created by Industrial Archaeology? The weekend will give an opportunity to discuss the problems, what is being done and to examine the state of Britain's industrial collections, and ask are they still in crisis? As well as papers from experts in their field, there will be the opportunity to visit the Coalbrookdale and Blists Hill collection stores of the Ironbridge Gorge Museum Trust.

These working weekends are open to all and are always stimulating, so if you haven't signed up yet it is not too late to contact Gordon Knowles (see the Diary page).

Annual Conference 1998

The annual conference of the AIA will be held at Seale Hayne Agricultural College, near Newton Abbot, Devon, commencing as usual with a seminar on Friday, September 4. The main weekend conference will be followed by programme of field visits and evening lectures, ending with a final field trip on Friday, September 11. The previous two AIA conferences in the westcountry were at Penzance in 1978 and Bath in 1987, so Newton Abbot fills in the gap. Booking forms and programmes are being distributed with this *IA News*, but further copies and information may be obtained from David Alderton, 48 Quay Street, Halesworth, Suffolk IP19 8EY.

Money, money, money

The Treasurer, Michael Messenger, would like to thank all those members who responded to his appeal to give deeds of covenant in favour of the AIA. The response has been excellent.

Subscriptions are now due and

those paying by direct debit will find the sub on their bank statement for 2 January. All other members should have received renewal requests and we hope you have responded by now. Do please consider sending back the deed of covenant form and direct debit authority with your renewal. Both have worthwhile benefits for the AIA.

Mining tour discount for members

Atalaya Tours are offering a discount of at least 5% on their basic prices to members of the AIA. The tours, developed since 1988, give one of the best ways of visiting some of the most important sites in the international history of mining. The tour programme for 1998 includes itineraries to Spain, Portugal, Mexico and the British Isles, all designed around the study areas but including some free time in the localities for general sight-seeing. They are Rio Tinto and the Iberian Pyrite Belt (17-24 April); Andalucia and Southern Spain (26 April to 4 May 1998); Northern Spain and Portugal, 20-27 June; Western Britain (14-24 August); Mexico (22 September to 6 October). For further details, contact Atalaya Tours Ltd, Ceinionfa, Capel Dewi, Aberystwyth SY23 3HR. /Fax 01970 828989.

AIA

ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

ANNOUNCING THE THREE FIELDWORK AND RECORDING AWARDS FOR 1998

The AIA Fieldwork Award scheme exists to encourage recording of the physical remains of the industrial period to high archaeological standards. The awards are open to both amateur and professional field workers, and have been operating successfully for almost a decade.

Work submitted may already have been published or, if not, may be encouraged to publish.

As well as the main award there is also the Initiative Award for innovative projects, eg those from local societies; and to encourage the future industrial archaeologists, a Student Category.

THE CLOSING DATE FOR ENTRIES IS 1ST MAY 1998

Successful Entries will be notified in August

The successful authors will be invited to attend the AIA annual conference in South Devon to collect their awards in September 1998

Entries should be sent to:

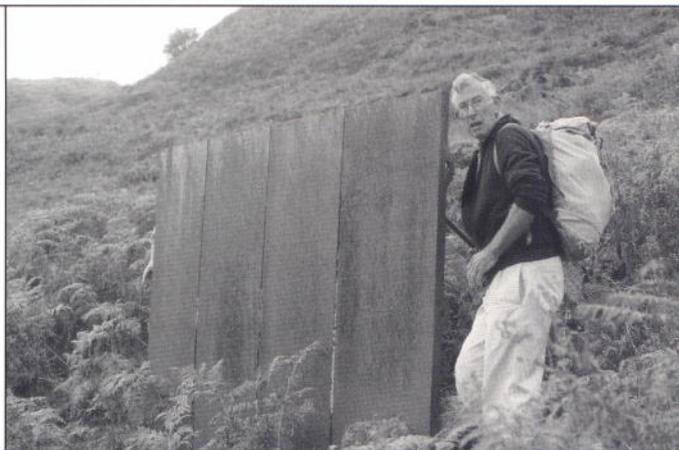
Victoria Beauchamp, c/o The Division of Adult Continuing Education
University of Sheffield, 196-198 West Street, Sheffield S1 4ET

FURTHER DETAILS WILL ALSO BE AVAILABLE FROM THE ABOVE ADDRESS

Quiz time

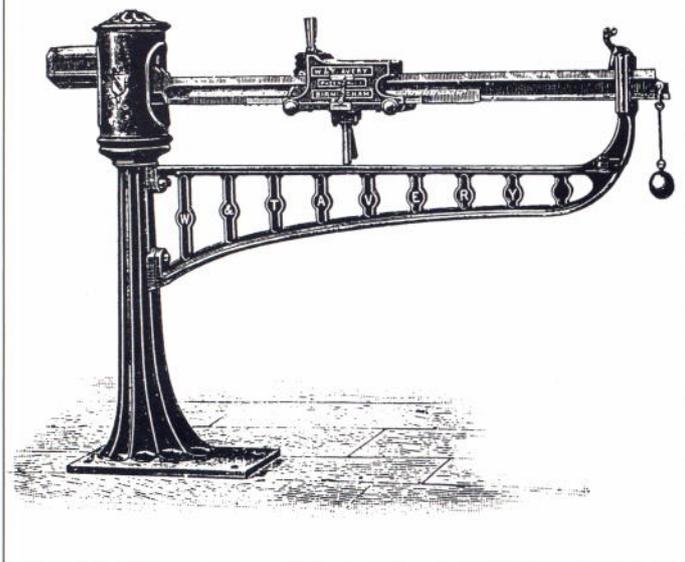
Walkers and industrial archaeologists in the English Lake District may be familiar with this curious piece of ironwork near Hollins Crag in the Little Langdale Valley (grid ref NY 295035). Your editor wasn't when it was pointed out to him last October with the words we all dread to hear: 'You're an industrial archaeologist, well what is it then?' Four large cast-iron plates are supported together in an upright position. There are geometric patterns inscribed across the face of the plates (something to do with engineering?) which suggests they were intended to be held together. On the back of each plate is 'Hill & Smith Brierley Hill Iron Works Nr Dudley & [??] Victoria Street London'. There are slate and copper mines in the general area, but none particularly near this spot. Re-use as a target came to mind, but what was it originally? All suggestions and answers to the editor please.

Peter Stanier



Weighbridge Pillar.

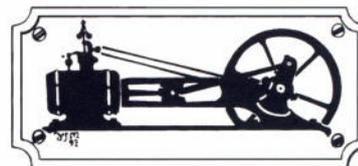
With Avery's Patent Recording Steelyard.



Weighbridge appeal

An appeal from the Black Country Living Museum: does any reader know where we can find an Avery 5-ton cart weighbridge? We hope to make our replica nineteenth-century pit fully working in 1998, but there's a major stumbling block: the lack of replacement parts for an incomplete weighbridge. Despite extensive searches, there seems to be nothing suitable in the Midlands. Even Avery's own museum only has a model of this type. Missing parts comprise the iron connecting rod, the steelyard, and the steelyard support arm.

If you can help, please contact Stephen Howard, Black Country Living Museum, Tipton Road, Dudley DY1 4SQ. 0121 557 9643. Fax 0121 557 4242.



Heritage Engineering

Consultants and contractors in the restoration of historic engineering including feasibility studies for Heritage Lottery Fund and ERDF funding. Recent projects have included restoration work on P.S. Waverley, a Victorian Underground Car, PS Maid of the Loch, a scheduled Bascule Bridge, various wind and watermill work, and a successful HLF/ERDF study for the Scottish Mining Museum.

We can also produce interpretive material, including a new exciting display medium.

Please contact us for a brochure or further information.

22 Carmyle Avenue – Glasgow – G32 8HJ

Tel: (0141) 763 0007 Fax: (0141) 763 0583

LETTERS

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

Frightful things

I congratulate Chris Miele for his article on the Kings Cross gasholders in the last issue of *IA News*. While writing, readers might be interested in the following contemporary comment, extracted from the Imperial Gas Company's Minutes, 25 January 1862: a letter from Mr John Butler of 13 Spanns Buildings, Agar Town, in which he writes 'I would like to know to whom I am to look for compensation for the injury done to my house by the erection of those frightful things opposite.' He continues with complaints such as a loss of trade at his shop, etc.

*Mary Mills
24 Humber Road, London SE3*

Challenge at Waltham Abbey

As we approach the millennium, Gunpowder Studies are coming of age. This may be seen in the work of individuals, and of groups at the national and international level. In particular, the exciting developments at Waltham Abbey Royal Gunpowder Mills, unthinkable even a decade ago, are beginning to offer a focus for much of this activity by providing a physical context within which the importance of the subject can be demonstrated through the rich industrial archaeological remains surviving there.

This former Ministry of Defence site lies north-east of London (centred at grid ref TL 376015). It was decommissioned in 1991, when visits organised by the Gunpowder Mills Study Group (which has flourished for 12 years under the chairmanship of Alan Crocker) found a very sorry picture of dilapidated buildings and encroaching vegetation. The future prospects were uncertain, but Angus Buchanan, then a Royal Commissioner, felt that there should at least be a survey of the site. His suggestion was taken up with enthusiasm and expertise by the RCHME, and it is the archaeological work of their officers which now underpins developments there. For the most accessible account of the survey, see Chapter 23, 'The Field Archaeology of Gunpowder Manufacture' by Paul Everson and Wayne Cocroft in *Gunpowder: The History of an International Technology* (ed. Brenda Buchanan, 1996).

In the meantime, there was a feeling in the community that a site of such local significance should not be lost, and so a consortium of interested parties was established with the MoD as key player, but also including English Heritage, English Nature, Essex County Council and the Lea Valley Regional Park Authority. A Steering Committee was set up with power to enter into contracts.

Much credit must go to this committee for their achievements: the site has been decontaminated at a cost of £16m, met by the MoD; a further £5m has been secured from the same body as an endowment fund, the investment of which will provide a steady income for the scheme, and a generous contingency fund has also been established against any more necessary decontamination work; lastly, a Heritage Lottery Fund grant has provided up to £6.5m to be spent on the essential work of restoring and



Waltham Abbey Royal Gunpowder Mills from the air

Photo: RCHME © Crown Copyright

displaying the site before the hoped-for opening to visitors in 1999. The ownership of the site and its assets have been vested in the Waltham Abbey Trust Company (WATCo), composed of four Foundation Trustees of whom I have the honour to be one. I was nominated by the Science Museum, the others by the MoD, English Heritage and English Nature. Steps are being taken to establish an Operating Charitable Company which will be concerned with the development of the site through schemes carried out with the financial approval of WATCo. It is intended by this separation of responsibilities that the integrity of the site and its funding will never be compromised.

There are bound to be some administrative difficulties in this period of transition, but the greatest problems concern the challenge of doing justice to a large, complex site of major international significance, the interpretation and display of which must meet the exacting standards of experts, whilst at the same time remaining accessible to local needs and interests. Altogether some 80,000 visitors a year must be attracted if financial viability is to be achieved.

In some ways these tasks would be easier if the site were less important, but superlatives may be used about its every aspect. It covers 71 hectares, and with 300 surviving structures and 21 listed buildings, more than two-thirds of it has justifiably been designated a Scheduled Ancient Monument. Secondly, with equal justification, 34 hectares have been designated a Site of Special Scientific Interest because wildlife (including the largest heronry in Essex) has flourished

in places to which the public has so long been denied access. And these areas are not distinct and separate, for there is artifice within the wild lands which must be placed in context - for example, waterways may reflect the need for power and transport rather than the natural course of the River Lea, and trees like alder may represent plantation growth for charcoal rather than natural seeding.

Most remarkably, this present landscape represents only the final stage of a process of evolution which began more than 300 years ago, and it is this remarkable continuity of use, in private hands until purchased by the Crown in 1787, which represents the third superb feature of Waltham Abbey - for it has ensured that at some time all the developments in the technology of powder making were to be found here before gunpowder was phased out from the 1880s by the advent of more powerful chemically-based explosives such as cordite. Even after the manufacture of explosives ceased in 1943 (due in part to war damage), research continued until the works closed in 1991, presenting the world of industrial archaeology with what is perhaps the greatest challenge it has yet faced.

Brenda Buchanan

Friends of Preetjes Mill

Adriaan Linters has sent information about this group of volunteers who have just completed the third restoration of an interesting windmill at Heule, near Kortrijk in Belgium. The editors of *Industrial Archaeology Review* went there with Adriaan in April 1997 while they were studying the archaeology of the textile industry in France and Belgium. Southern Belgium was an important flax growing and processing area in the nineteenth



The treadle-operated Flemish scutching wheel standing beneath the cross-tree of the postmill

Photo: Marilyn Palmer

century, particularly in the Lys valley, and the National Flax Museum at Kortrijk is well worth a visit. Whereas in Northern Ireland, flax scutching was carried out in small water-powered mills, the Flemish continued to use treadle-powered scutching wheels in a domestic environment. In this part of Europe, windpower was used for numerous industrial processes and was eventually applied to scutching.

Preetjes Mill is believed to be the only surviving wind-powered flax scutching mill left in Europe. The postmill was built in the 1860s and worked until the First World War. It then lay disused until it was listed as a historic monument in 1944, after which two attempts at restoration were made. The Friends have now restored the mill to working order in its original form. The two plain and two patent sails drive the flax scutching machinery from the base of the main shaft by means of bevel gearing and belt drive. One scutching wheel remains in position, and the mill also displays a



The interior of the roundhouse at the windmill with the belt-driven scutching wheel on the right

Photo: Marilyn Palmer

Flemish scutching wheel operated by treadles.

The Friends would like to know of any similar scutching windmills and also of any preserved water or wind-powered scutching mills for flax, hemp or other fibres. They have a web site (in Dutch) at <http://uc2.unical.be/flecs/molen> and they may be contacted by e-mail through Alain Derycke at AlainGJ@msn.com. The mill is located at Hoge Dreef 24A, 8710 Heule, Kortrijk, West-Vlaanderen, Belgium.

Dundee and jute

The emergence of Scotland's fourth city as a major force in tourism north of the border has been consolidated with the opening of a new development at the Verdant Works Textile Museum in Dundee. Completion of the £750,000 phase two development offers a unique and fascinating insight into the City of Discovery's long association with the jute and textile trade. The exhibition is one of the first in Scotland to feature an innovative mix of computer and video technology, combined with the latest hands-on mechanical displays. Key to the appeal is its reliance on interactive displays, where visitors must explore the exhibits and discover for themselves how machines worked, how the workers lived and how jute was used for a myriad of purposes.

The new development depicts the many uses of jute around the home and in industry, charting the decline of the jute industry in Dundee and the subsequent growth of polypropylene industries.

The museum is also home to the world's first 'Jute Boutique' - an unlikely collection of 1950s clothing produced as a last desperate attempt to find new markets for jute products. The display includes a dress reluctantly worn by the wife of a prominent local mill owner as an advertisement for this short-lived and rather uncomfortable fashion!

A section is dedicated to the story of Dundee, India and Bangladesh, showing the links between Scotland and Asia past and present. Meanwhile, part of the top floor of the Verdant Works has been transformed into a social history gallery which compares the grinding poverty of the mill workers with the opulence of the jute barons through the lives of two fictional characters.

The phenomenon of the 'kettle-biller', the rise of the women's movement in Dundee, the poor health of the workers, the half-time school and leisure pursuits of the mill workers are depicted in a display which resonates

with the experiences of hundreds of families across the city.

Successful waterways conference

On 11 October last, 120 delegates gathered at Manchester to make the Waterways History Conference a resounding success. Organised for the Railway & Canal Historical Society, the event had expanded several times, but was still significantly over-subscribed. It was sponsored and supported by the Newcomen Society, British Waterways, the National Waterways Museum and *Local History* magazine.

There has been a dearth of written waterways history in recent times, and little new research is being brought to publication, or even notice. The conference's principal aims were to stimulate high quality research, encourage co-operation, and promote publication. To this end, details were circulated of some 20 publications willing to accept articles on all aspects of waterways history, in its widest sense.

The day was a bringing-together of expertise and interest from all over the country, to move waterways history forward. Topics addressed by oral and poster presentations ranged from nautical archaeology to oral history, hydrology to natural history. This approach also vividly illustrated the benefits of cross-disciplinary co-operation between both individuals and special-interest bodies, at all levels.

Feedback has indicated a high level of support for a follow-up event. This is likely to be held in the Midlands during 1998 and details will be published as soon as available. Early booking is advised.

Paul Sillitoe

PS Waverley to be rebuilt

You may have noticed that for the year 2000 a number of our National Monuments are about to be repaired, refurbished or rebuilt to render them serviceable for a good many years to come. This is because funding is available and the Millennium makes one take a more long term view than is perhaps normal. Along with the schemes to renovate buildings is one to rebuild the 50 years old Clyde paddle steamer *Waverley*.

The project envisages stripping the vessel completely down to a bare hull and rebuilding using modern materials. The superstructure would be replaced in aluminium with new decks, funnels

and foremast to follow. In order to make the ship easier to berth it is proposed to add a rudder at the bow and a bow thruster. Deck officers familiar with the day to day handling of a paddle steamer are becoming hard to find. However, the original triple expansion steam engines installed in 1947 by Rankin and Blackmore of the Eagle Foundry, Greenock, will remain. The tradition of going down to see the engines is too important to be broken.

If rebuilt as above, the *Waverley* would then require only the same kind of maintenance as a newly-built vessel and should remain viable until 2020 or later. A number of historic European paddle steamers have been treated in a similar manner and passenger facilities and crew accommodation brought into line with present-day expectations.

It is appreciated that some die-hard traditionalists may object to such an extensive modernisation and claim that the ship might be spoilt. The decision to rebuild is being made largely on financial grounds. Annual winter refit costs would be reduced from more than £200,000 to about £75,000. By 2020, the number of people who remember what a paddle steamer was like in the 1950s will be rather small and there will still be a sea-going paddle steamer taking passengers on short cruises around the coast of Britain.

The Heritage Lottery Fund, it is hoped, will provide three quarters of the £4m rebuilding cost and if this funding receives early approval *Waverley* could be out of service for the summer of 1998. We may already have seen the last of this famous ship in her original condition.

Robert Carr



Steam capstan and steering gear at the stern of PS Waverley

Photo: R.J.M. Carr



The Waverley's upper aft saloon looking forward; currently used as a cafeteria

Photo: R.J.M. Carr

The money at last

Greater London is unique in being the only region in Britain without an industrial museum. We have been waiting for about 25 years for the Museum of London's Museum in Docklands project to get the go-ahead and it has been quite a prolonged cat and mouse business. However, at the beginning of October 1997 we finally heard officially that the new museum, which will fulfil the role of an industrial museum for London, has received funding and is to open in the George Gwilt warehouses on the North Quay of William Jessop's West India Import Dock in January 2000.

Robert Carr

Flying in to Lincolnshire

The 54th East Midlands IA Conference held on 18 October last concentrated on 'RAF Lincolnshire' and was held in the elegant surroundings of the RAF College at Cranwell. Cranwell itself is of considerable interest: initially commissioned by the Royal Naval Air Service in 1916 as a part of HMS Daedalus, it subsequently became in 1920 the first Air Academy in the world. The current buildings, in a neo classical style which owes much to Wren, opened in 1934.

Ray Hooley, archivist to the Ruston Company, spoke on WWI aircraft production in Lincolnshire. The engineering skills of four Lincolnshire companies and their expertise in building substantially timber agricultural machinery such as threshers made them ideal for early aircraft production. The companies involved were Robey, Clayton and Shuttlesworth, Ruston and Proctor, all based in Lincoln, and Marshalls in Gainsborough. Robey made several attempts to develop his own aircraft which were principally distinguished by their inability to fly, while other companies made only on War Department contracts. The total numbers of aircraft produced during WWI were significant: Robey 305, Claytons 624, Marshalls 150-250, and Rustons 2,750 aircraft and over 4,000 engines. Types included Sopwith 806 Gunbuses, Camels, Strutters, Triplanes and Snipes, Bristol F2Bs, Short 184 Seaplanes, Maurice Farman Longhorns, HP 0400 Bombers, BE2 C, D and E types. The sole survivor of wartime production is a Ruston-built BE2C in the Imperial War Museum. After the war, all the companies reverted to their original activities and were not involved in aircraft production in the Second World War.

Dr Mike Osborne spoke on the Defence of Britain project which aims to log remaining twentieth-century defence sites and then produce a coherent strategy for selective protection. The sites cover both world wars and the remaining cold war defences. The scope of the project is considerable as there are thousands of sites - pill boxes alone account for over 18,000. A pilot survey in the Holderness area of East Yorkshire found over 500 sites. Surveys focus on clear typologies of buildings such as airfield control towers, hangers, huts, pill boxes and defence centres as well as the eclectic such as the Bison wheeled mobile concrete pill box. Further information on the project and how you can help can be obtained from The Defence of Britain Project, c/o The Imperial War Museum, Duxford Airfield, Cambridge CB2 4QR.

Mike Hodgson spoke on the development of military flying in Lincolnshire. 1909 saw the first abortive attempt at lighter-than-air flight in the county, followed in 1913 by a successful flight in a Blackburn monoplane, which still exists in flying condition in the Shuttleworth Collection. In 1914, the RNAS founded their first base at Immingham, followed by the second East Church mobile squadron based on Skegness. Following the Zeppelin raids in 1915, the East Coast Gun Line was set up. As the training fields developed, canvas hangers gave way to more substantial Belfast truss structures. By 1918, there were 37 Lincolnshire airfields, but only three survived through the 1920s. By the end of the Second World War there were 48 airfields in the county giving it the biggest concentration in the UK. Of the 55,000 bomber command airmen who lost their lives in the war, 21,000 were flying from Lincolnshire airfields. The current situation is similar to that after WWI, with three active RAF airfields left in the county.

In the afternoon, delegates visited by coach some of the sites of former and current RAF bases in the North Kesteven area, including the watch tower at Coleby Grange and the visitor centre at Metheringham.

Mark Sissons

Science museum closes

The Museum of Science and Industry in Newhall Street, Birmingham, closed on 31 October 1997. Although it is planned to move 80 per cent of 'what is good' to a new exhibition site called the Discovery Centre, at Millennium Point, Digbeth, there are fears that

what is finally accomplished in 2001, when the new centre is due to open, might be less than what is presently proposed due to cuts in funding and changes in policy, fashion and so on. Looking at comparable 'Museums of Science and Industry' in other large industrial cities it is noticeable that money often runs out when it comes to exhibits and especially so for the provision of scholarly information. It is sometimes quite difficult to ascertain even the provenance of some items on display. What Birmingham had to offer was the accumulation of information built up by museum staff and volunteers over four and a half decades. Perhaps what is really needed now is a museum of museums.

Robert Carr

A DeWinton planing machine

The Caernarfon works of DeWinton & Co. manufactured a wide range of products for marine, quarry, sugar refining and construction work. They are perhaps best known for their 0-4-0 vertical-boilered tank locomotives, euphemistically referred to as 'coffee pots'. They were usually built for the narrow gauge and used in several quarries in the region.

In 1868, DeWintons made a large planing machine for the proprietors of the Pen-yr-Orsedd slate quarry and it was eventually installed in an outbuilding at their No.6 mill [SH 51015379]. This is now reputed to be the only example of a slate planing machine, by this manufacturer, still in existence. It is thought to have last worked in 1964 and has survived, virtually intact, the ravages of time and mindless vandalism which so often decide the fate of industrial monuments.

I made a detailed record of the machine in August 1996, ahead of the quarry's closure and recent purchase by the MacAlpine company.

Peter M. Hughes

Grants from English Heritage

English Heritage's list of repair grants offered during 1996-7 for historic buildings and monuments of all types shows that 700 properties were offered a total of some £20m. The scheduled Industrial Monuments in receipt of new grants were Tolgus Tin Mill, Cornwall (£3,600); Lanercost Old Bridge, Cumbria (£50,000); Chatham Dockyard No.7 Covered Slip, Kent (£260,000); Almonry Barn, Muchelney, Somerset (£46,530); Chatterley Whitfield Colliery, Tunstall, Staffs (£11,000); Chilworth Gunpowder Mills, Surrey (£5,000).

New Historic Buildings grants were offered to Devonshire Dock Buildings, Barrow Island, Cumbria (£25,000); Dixon's Shaddon Mill Chimney, Carlisle, Cumbria (£50,000); Syreford Mill, Whittington, Gloucs (£6,000); Wapping Hydraulic Pumping Station, Tower Hamlets, London (£138,538); Home Farm Barn, Breamore, Hampshire (£30,662); Hales Hall Barn, Loddon, Norfolk (£74,738); Kiln Warehouse, former maltings, Newark, Notts (£200,000); Cheddleton Flint Mill, Staffs (£15,485).

Increases in grants were made to Shade Windmill, Soham, Cambs (£6,134); West Wrattling Windmill, Cambs (£2,000); Croxdale Hall Haybarn, Durham (£2,673); Thaxted Windmill, Essex (£3,004); Stanley Mill, King's Stanley, Gloucs (£62,220); Homersfield Bridge, Norfolk (£5,078); Charlton Court Farm Barn, Steyning, West Sussex (£115,155).



The DeWinton planing machine at Pen-yr-Orsedd slate quarry

Photo: P.M. Hughes

Bridge book highly commended

Congratulations to artist and industrial archaeologist Falcon Hildred, whose richly illustrated 26-page book *Newport Transporter Bridge* has been Highly Commended in the Gulbenkian Foundation Awards 1997. The book won the AIA Recording Initiative Award in 1996 and was reviewed in *Industrial Archaeology Review*, vol XIX, 1997, 107. For further information and copies of the book, contact: Shop Manager, Newport Museum and Art Gallery, John Frost Square, Newport, Gwent NP9 1PA. (01633 840064.

Books Received

The following books have been received for review in *Industrial Archaeology Review*:

Abinger and the Royal Greenwich Observatory, by Peter Tarplee (Surrey Industrial History Group, 1996).

A Guide to the Industrial History of Epsom and Ewell, by Peter Wakefield (Surrey Industrial History Group, 1997).

Basic Surveying, 4th edition, by W. Lyte and R. Paul (Laxton's, 1997).

The primary aim of this book is to provide a guide to current practice and equipment for non-specialist surveyors in the various professions involved in the construction industry and the environment.

Business History and Business Culture, ed. by Andrew Godley & Oliver M. Westall (Manchester University Press, 1996).

This pioneering inter-disciplinary collection brings together economists, sociologists and business historians to explore the issue of culture in the understanding of economic performance in businesses and nations.

Encyclopaedia of Architectural Terms, by James Stevens Curl (Donhead, 1997).

This book provides a comprehensive, clearly written, practical guide to architectural and building terminology. It contains over 3,500 items offering definitions of styles, the components of buildings, materials, the various parts of Orders, architectural details and much more.

Coal Mining in Canada: A Historical and Comparative Overview, by Delphin A. Muise & Robert G. McIntosh (National Museum of Science and Technology, Ottawa, 1996).

An assessment of the technological, material cultural, social and political history of Canada's coal industry.

Exploring Cornish Mines, Volume 3, by Kenneth Brown & Bob Acton (Landfall Publications, 1997).

This volume contains five guided tours of mines on Caradon Moor, East Wheal Rose and Cargoll mines, mines around St. Agnes, the Wendron district and Geevor and Levant mines.

Henry Simon of Manchester 1835-1899, by Brian Simon (The Pendene Press, 1997).

Henry Simon carried through a successful revolution in the flour milling industry but also pioneered the use of by-product coke ovens in an attempt to modernise the iron and steel industry.

Reclamation of damaged land for nature conservation, by Land Use Consultants with Wardell Armstrong (DOE/HMSO, 1996).

The purpose of this book is to assist central and local government, the minerals industry, land restoration agencies, consultants and other relevant organisations when dealing with the assessment, protection, creation and management of nature conservation interest on damaged land.

The Archaeology of the Clay Tobacco Pipe: XIV. The Development of the Clay Tobacco Pipe Kiln in the British Isles, by Allan Peacey (BAR British series 246, 1996)

The International Canal Monuments (Occasional Paper for the World Heritage Convention, ICOMOS/TICCIH, 1996)

The Kennet & Avon Canal: a Journey from Newbury to Bath in 1964, by John Russell (Millstream Books, 1997).

A photographic journey along the length of the Kennet & Avon Canal. The photographs were taken in 1964 and are in many cases of considerable historical significance as restoration of the canal was then only a distant dream and much of the canal was derelict.

The Minions Moor, by Peter Stanier (St Ives Printing & Publishing Co, 1996)

Completely new and enlarged edition of a popular guide to the impressively rich prehistoric and industrial mining landscape of a corner of Bodmin Moor in Cornwall.

The Quest for Comfort, by Brian Roberts (CIBSE, 1997)

A selective pictorial history of the early days of building services to mark the Centenary of the Chartered Institution of Building Services Engineers 1897-1997.

The Ruins of Craibstone Limekilns, Deskford, by N. A. Brown (Scottish Vernacular Buildings Working Group, 1996).

This *Regional and Thematic Studies* publication from the Scottish Vernacular Buildings Group is an effort to record the remains of Craibstone Limekilns and put the findings of the site survey into the wider context of a former national industry.

Transport in Peckham and Nunhead, by John D. Beasley (South Riding Press, 1997).

A 96-page book with 87 pictures which covers all forms of transport used since Roman times in what today is London SE15.

Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review*.

BIAGscope (Newsletter of Berkshire Industrial Archaeology Group) 33, 34 & 35.

Conservation Bulletin, 30 (November 1996), 31 (March 1997) 32 (July 1997) and Index to Issues Nos. 1-30 & Supplements.

GLIAS Newsletter (London) 167 (December 1996) & 168 (February 1997).

Industrial Heritage 14/4, 15/1, 15/2 & 15/3.

Journal of the Norfolk Industrial Archaeology Society, vol 6 No.1, 1996.

The Mundling Stick (Newsletter of the Lion Salt Works Trust) vol 2, No.4, Winter 1996; Vol. 3 Nos.2 & 3, Summer & Autumn 1997.

Panel for Historical Engineering Works Newsletter, Nos. 74 & 75, June & September 1997.

Somerset Industrial Archaeological Society Bulletin, No.73 (December 1996), No. 74 (April 1997) & No. 75 (August 1997).

Suffolk Industrial Archaeology Society Newsletter, No.56 (November 1996) & No. 58 (June 1997).

Surrey Industrial History Group Newsletter, No.94 (November 1996).

Sussex Industrial Archaeology Society Newsletter, No.93 (January 1997), No.94 (April 1997), No. 95 (July 1997) & No. 96 (October 1997).

Wind and Water Mills, No.16.

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East Anglia

The sixth EERIAC Conference was held in Stretham in June, and was thoroughly enjoyable. The lectures looked at fen drainage, covering steam drainage and the floods of 1957. The afternoon visit combined Stretham Old Engine in its relatively newly restored state, and the Cambridge brick and tile company which produces bricks mainly for restoration work, using new premises and plant but old techniques.

The Cambridge IAS this year published *Cambridge Iron Founders* which was a runner-up in the Trubshaw award, given each year for a piece of local history research, not necessarily published. One suspects the competition in Cambridge must have been fierce, so they are very much to be congratulated. Copies are available for £4.95 incl. postage from Ken Alger, 102 Cottenham Road, Histon, Cambridge CB4 4ET. At Cheddars Lane, the museum is trying acquire the adjacent small nineteenth-century gas holder, the oldest on the Cambridge gasworks site, now being redeveloped. It has also been promised funding from the local authority and English Heritage to repair a major crack in the engine house wall. A photographic survey was made of remains on the Chivers Histon site prior to demolition: the only building from the whole complex to survive is likely to be the signal box for the works siding.

At Peterborough, the Baker-Perkins factory has been sold to become the site for a new prison - this seems to be becoming a local habit, following as it does the similar reuse of the Whitmoor marshalling yards.

In Suffolk, the restoration, or perhaps more accurately, the replacement, of Great Cornard Lock on the Stour Navigation has been completed and the lock opened. Meanwhile, volunteers have started work on Needham Market lock on the Gipping Navigation. Peter Dolman and his team continue with restoration work on Stanton post mill. Drinkstone Mill has recently been sold by the last surviving member of the Clover family who had owned it for over 150 years, I understand to a mill enthusiast, so its future looks hopeful.

The Suffolk IAS has surveyed the early twentieth-century private electricity generating plant at Lark Mills, Mildenhall and assisted the Suffolk Archaeological Society in a survey of the remains of Ellough brickworks. A notable loss, sadly unrecorded, was the Harris bacon and pie factory on Hadleigh Road Ipswich - one of those

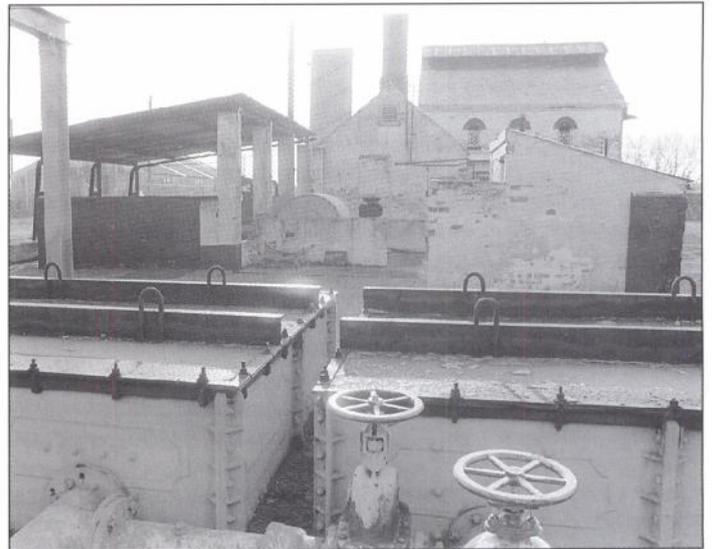
sudden disappearances with which all industrial archaeologists are familiar. The very large blocks of maltings south of the river in Ipswich are listed but totally unmaintained and crumbling fast, looking all too ripe for demolition on safety grounds. Also under threat are the tram depot and electricity generating station on Constantine Road. Another loss has been Robert Ransome's grave in the redevelopment of the Quaker Meeting House site. It is now totally unmarked.

In Norfolk, there is still much concern about the Colman's site, now largely disused, though English Heritage has listed a number of buildings. One recently discovered and listed oddity is a pottery kiln, probably used for making jars and pots for mustard. Site research has not been helped by the removal of the firm's archive to Port Sunlight. Happier news is that Railtrack intend remodelling Norwich (Thorpe) Station forecourt to restore it to largely its late nineteenth-century appearance, and may well restore the war-damaged roof line of the main building.

The closure of the gas museums at Bromley, Hitchin and Tingley has led to considerable amounts of material being moved to Fakenham gasworks, where it awaits reorganisation and display. Fakenham's own future is being secured by the sorting out of ownership and other problems dating back to the creation of the trust, and is has recently featured on television as part of a series on volunteers working in local history. Gunton Mill continues to star regularly, being seen in Stendhal's 'Scarlet and Black' and soon in a programme on Hayes of Saxthorpe, inventor of the treadmill.

The Norfolk IAS continues its regular surveys: one of the more interesting sites was a brick kiln in North Walsham, not known to have been used since the mid nineteenth century, but which turns out to be built of very rough mass concrete with a brick facing. This leads to an area of concern: the failure of listing authorities to consider seriously the merits of twentieth-century concrete structures. At Read's Flour Mill, beside the river in Norwich, the nineteenth-century brick structure (admittedly once part of a spinning mill) is listed, but the fine twentieth-century silo is not. An interesting early reinforced concrete structure on the Colman's site is thought to have been similarly ignored.

Finally, from Essex Shane Gould reports that the county's major assessment of its industrial heritage



Fakenham gas works, which closed in 1965, is the last surviving example of a small town gas works in England
Photo: David Alderton

continues, with further surveys giving a comparative analysis of all sites of a given type having been completed. These include historic boundary markers, the malt industry and iron foundries. There are on-going surveys of W.W.1 military airfields, farmsteads on Canvey Island, brick and tile works, public water supply and workhouses. Intensive surveys funded by the developer as part of the planning process include the 1960s Occidental oil refinery on Canvey, an isinglass factory in Coggeshall, St Faith's Hospital, an 1854 industrial school and Longbarns, Abbess Roding, a nineteenth-century model farm. Request surveys made to the RCHME include Mistley No 1 malting, the lime-kiln at Beaumont Quay and various military sites.

David Alderton

Yorkshire and Humberside

This is a difficult time for industrial and other museums, and a sharp reminder came with Sheffield City Council's decision for financial reasons to close Abbeydale Industrial Hamlet, the Grade I listed powered scythe works which was a pioneer of industrial preservation. It shut on 1 April 1997, as did the Grade II* listed cutlery grinding works of Shepherd Wheel. There was strong local opposition and the Council said the intention was to reopen them under new management, but it became evident that there were no immediate plans for this. Now the Kelham Island Museum Trust is becoming a Sheffield Industrial Museums Trust and expects to take charge, reopening Abbeydale in the spring. The supporters' group

ASWAT will be involved, and local firms including Meadowhall shopping centre and Kvaerner Metals will make substantial grants. The new management will face large arrears of repairs and maintenance.

After much work to find funding to stay open, the National Mining Museum at Caphouse Colliery had to stop underground visits on 1 August because of a rising water table caused by inadequate pumping from closed pits. Visitor numbers fell sharply, and the museum is now seeking funding to move the underground visits to the Flockton Seam at a higher level. The transport theme park Transperience at Bradford closed for the winter and will cut opening hours drastically this summer, while the 1998 budget proposals for Calderdale include closing the Industrial Museum in Halifax and the local museum in the weaving village of Heptonstall. The Museum of Army Transport, Beverley, has closed, but on a happier note Hull Museums have gained lottery funding for the Museum of Transport and 'Streetlife'.

The closed Yorkshire Motor Museum at Keighley has become the Skopos Motor Museum at Alexandra Mills, Batley, adjoining the Skopos Mills Village. The Magna project for the former Templeborough steel works at Rotherham has obtained up to £18.6m of Millenium Commission funding to develop an exhibition, conference, educational and leisure centre on the theme of industry and innovation; a Ride of Steel in a 'ladle' through a simulated steel works will be part of the third phase.

West Mill, Huddersfield, which was converted by the University of Huddersfield for its School of

REGIONAL NEWS

Computing and Mathematics, won the 1996 Ironbridge Award for the adaptive reuse of a historic building, while the conversions of Kirksall Brewery to student flats and the 1832 flax mill Rose Wharf to offices have been given Leeds Awards for Architecture. Most of the 25 flats in the Terminal (1819) and Grain Warehouses at Sheffield Canal Basin (now Victoria Quays) were snapped up in their first fortnight on the market. Developers M.J. Gleeson are planning to build 86 flats and houses in Sheffield's Kelham Island

Conservation Area, restoring the Grade II* listed Cornish Place works of silver plate firm James Dixon and the Brooklyn edge tool works.

The former water-powered cotton spinning Gibson Mill at Hardcastle Craggs near Hebden Bridge is being restored by the National Trust to show the benefits of recycling and sustainable energy sources, and National Power are restoring its 1929 Gilkes water turbine. Brighthouse Flour Mills, Calderdale, associated with the Sugden family from 1891 to 1962 and

then owned by Allied Mills, closed in September 1997. Snuffmakers Wilson & Co. of Sharrow Mills, Sheffield, have been permitted to remove listed grinding machinery built for steam power if part is given to Kelham Island Museum; the waterwheel and the mill it powers are not affected.

In 1997 Sheffield celebrated 700 years of cutlery making - or more precisely 700 years since the first reference, in a tax return - with exhibitions and a new history of the Cutlers' Company, *From Mesters to*

Mesters, edited by Clyde Binfield and David Hey (Oxford University Press).

Opencasting for coal often reveals the remains of early underground workings, and increasing efforts are being made to record these. The South Yorkshire Archaeology Service has recently had a watching brief at a site at Little Houghton near Barnsley, and has arranged for Ron Fitzgerald to study a bell pit (which proved to be for iron ore) as it was removed in a garden near Thorpe Hesley, Rotherham.

Derek Bayliss and David Cant

EDUCATION

If you know of courses or other educational matters which might be of interest to our readers, please send details to the editor for inclusion in future issues of Industrial Archaeology News.

Industrial archaeology at Leicester University

Dr Marilyn Palmer has taught industrial archaeology at Leicester in the Department of Adult Education and, more recently, as a third year option within the School of Archaeological Studies. On 1 January 1998, Marilyn became a Reader in Industrial Archaeology in the School of

Archaeological Studies and Peter Neaverson an Honorary Research Fellow. The IA's *Industrial Archaeology Review* will be based in the School, no longer in the Department of History.

The School of Archaeological Studies at Leicester is the only university in Britain to accept industrial archaeology fully as part of the discipline of archaeology within a university context. While English

Heritage, Cadw, the Royal Commissions on Historical Monuments and other statutory bodies have recognised the international importance of the remains of Britain's industrial past for at least the last decade, academia has lagged sadly behind. Post-medieval, historical and industrial archaeology, together with the archaeology of standing buildings, are included within the core courses

for undergraduate archaeology students at Leicester, and there is no shortage of takers. A new MA in Historical Archaeology will include industrial archaeology as an option, while the existing MA in Landscape Studies covers industrial landscapes.

The School of Archaeological Studies at Leicester University, then, offers truly inter-disciplinary and multi-period courses in archaeology.

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
Stuart Warburton, 48 James Street, Coalville, Leicestershire LE6 3BW

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
John Stengelhofen, Withy Garden, Loggans Road, Copperhouse, Hayle, Cornwall TR27 4PL

ADVERTISE IN IA NEWS

IA News now takes advertising. The publication reaches a wide readership through direct subscriptions, circulation to affiliated organisations and use in libraries.

The market reached will be attractive to publishers, tour operators, heritage consultants and visitor attractions.

Advertising rates range from as little as £30 to £170 for a full page.

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.

21 March 1998 GUNPOWDER AND GOVERNMENT

at Rewley House, Wellington Square, Oxford, a dayschool examining the manufacture of gunpowder in its local, national and international contexts. Details from Local History Course Assistant, OUDCE, 1 Wellington Square, Oxford, OX1 2JA. 01865 270369.

3-5 April 1998 NAUTICAL ARCHAEOLOGY SOCIETY ANNUAL CONFERENCE

at Hartlepool, including the maritime heritage of NE England, recent archaeology, conservation and shipbuilding. For information, contact Tees Archaeology, Sir William Gray House, Clarence Road, Hartlepool TS24 8BT. 01429 523455. Fax 01429 523477.

4-5 April 1998 AIA IRONBRIDGE WEEKEND

at Ironbridge, annual weekend on the theme of 'Industrial Collections in Crisis'. All welcome. For details, please contact Gordon Knowles, Affiliated

Societies Liaison Officer, 7 Squirrels Green, Great Bookham, Leatherhead, Surrey KT23 3LE.

4 April 1998 SOUTH WEST REGION IA CONFERENCE

at Godolphin School, Salisbury. Details available from Robert Steel, 3 Shady Bower Close, Salisbury SP1 2RQ. 01722 332955.

17-24 April 1998 RIO TINTO & THE IBERIAN PYRITE BELT

mining study tour, with discount for AIA members. Full details from Atalaya Tours Ltd, Ceinionfa, Capel Dewi, Aberystwyth SY23 3HR. /Fax 01970 828989.

25 April 1998 SOUTH EAST REGION IA CONFERENCE

at Princes Hall, Aldershot on the theme of 'Secret South East'. Details from J.D. Asteraki, 122 Reading Road, Finchampstead, Wokingham, Bucks RG40 4RA.

26 April - 4 May 1998 ANDALUCIA & SOUTHERN SPAIN

mining study tour, with discount for AIA members. Full details from Atalaya Tours Ltd, Ceinionfa, Capel Dewi, Aberystwyth SY23 3HR. /Fax 01970 828989.

16 May 1998 EMIAAC 55

at Loughborough Grammar School, Loughborough, East Midlands Industrial Archaeology Conference, entitled 'Leicester's Water Supply: I'll Drink to That...!' Lectures and afternoon visits. For details, send SAE to Mark Sissons, 1 Far Coton, Market Bosworth, Nuneaton, Warwickshire CV13 0PJ.

15-17 May 1998 NAMHO FIELD MEET '98

at Nenthead, Cumbria, with surface and underground field visits. Details from Sheila Barker, The Rise, Alston, Cumbria CA9 3DB.

7-17 June 1998 MILLS TOUR OF CYCLADIC ISLANDS

wind and water mills of Greek islands of Andros, Mykonos, Paros and Tinos. Details from Alan Gifford 01283 702299, or full itinerary and booking details from Island Holidays 01764 670107.

13 June 1998 EAST OF ENGLAND REGION IA CONFERENCE

at Bury St Edmunds, lectures with field visit. Booking forms and further details from Mrs B. Taylor, Crown House, Horsham St Faiths, Norwich NR10 3JJ.

25-26 June 1998 CONFERENCE ON THE HISTORY OF SCIENCE AND TECHNOLOGY IN EDUCATION AND TRAINING IN EUROPE

at the European Parliament, Strasbourg, to review the role of the history of science and technology in education and training. Details from Prof Claude Debru, Centre Européen d'Histoire de la Médecine, Faculté de Médecine, 4 rue Kirschleger, 67085 Strasbourg Cedex, France, Fax 33 3 88 24 33 01.

26-27 June 1998 SHIP DATABASE WORKSHOP

at Newcastle University, an opportunity for developers and users of ship databases (ships built, types, wrecks, etc) to meet and discuss. Contact Dr I.L. Buxton, Department of Marine Technology, University of Newcastle, Newcastle upon Tyne NE1 7RU. 0191 222 6712, Fax 0191 222 5491, E-mail i.l.buxton@newcastle.ac.uk.

4-11 September 1998 AIA ANNUAL CONFERENCE 1998

at Seale Hayne Agricultural College, near Newton Abbot, Devon. Friday seminar and weekend conference followed by programme of field visits and evening lectures. Booking forms and information from David Alderton, 48 Quay Street, Halesworth, Suffolk IP19 8EY.

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.



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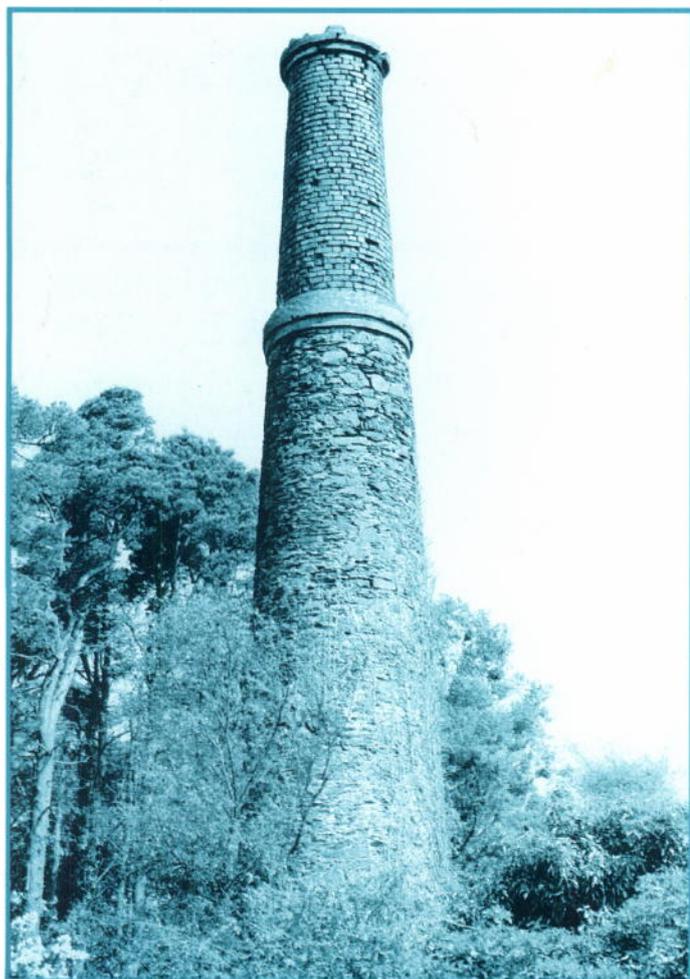
Published by the Association for Industrial Archaeology. Contributions should be sent to the Editor, Dr Peter Stanier, 49 Breach Lane, Shaftesbury, Dorset SP7 8LF. News and press releases may be sent to the Editor or the appropriate AIA Regional Correspondents. The Editor may be telephoned on 01747 854707.

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 Membership Secretary, Association for Industrial Archaeology, The Wharfage, Ironbridge, Telford, Shropshire TF8 7AW, England. 01952 433522.

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



Lead mine chimney at Whitespots, N. Ireland (see page 7)

Photo: Amber Patrick