**AIA Derbyshire Conference 2005**

Although this was a Derbyshire conference, accommodation and proceedings were held over the border at Nottingham University on 2-8 September. Mark Sissons, Ian Mitchell and fellow members of the Derbyshire IA Society deserve our deepest thanks, and not forgetting Tony Parkes and Michael Messenger for their organisational skills. Thanks also to John Brown for contributions to this report. We look forward to the Isle of Man in 2006.

Roger Ford

The pre-conference seminar which concerned IA in the National Parks took place during the day of Friday 2 September. The seminar revealed the very positive work now being undertaken by archaeologists from the National Parks, National Trust, English Heritage and other bodies, and a report will be included in the next issue of IA News. The main conference started in the evening when delegates were welcomed by Marilyn Palmer, Professor of Industrial Archaeology at Leicester University and Chairman of AIA, before Ian Mitchell gave an overview of the IA of Derbyshire, mentioning the main sites to be visited during the week. Two members' contributions followed: Derek Brumhead on the New Mills site which features the millennium walkway through the gorge, and Barry Hood on the Otago gold field in New Zealand, with particular attention to sites along the Karawarau Gorge.

Saturday commenced with a lecture by Mike Kaye on the Derwent Valley Mills World Heritage Site, which was designated in 2001 and extends from Derby to Matlock Bath. He first defined the conditions attached to this designation, and all the criteria required to obtain listing – not only for IA sites but also for such places as the Taj Mahal. There are now 812 in total, and the UK has five of the 33 industrial sites. Peter Billson spoke on Derby’s textile mills, with particular reference to Ryknield Mills, now being adaptively re-used for accommodation. Finally, Ian Thomas of the National Stone Centre talked on Derbyshire’s extractive industries. These include Limestone and annual limestone output is now 25 million tons. Also mentioned were gritstones, sandstone quarries, stone slate quarries (for roofing), sand and gravel extraction, florosp, blue John and lead. Derbyshire had huge coal measures, most of which have been removed by open-casting, along with ironstone and pottery clay.

After lunch, in brilliant sunshine, delegates had the choice of three visits: Swadlincote potteries, Belper mills and Strutt housing, or Heage windmill and Morley Park ironworks. The main attraction on the Swadlincote trip was Sharpe’s Pottery, which closed in 1967 after manufacturing on various sites since 1821. Their market from the 1860s was water closets and sewerage systems (they supplied Thomas Crapper & Co.). The source of the clay was from the coal seams. Listed bottle kilns were also seen at Gresley Common.

The Belper trip featured Jedediah Strutt’s fireproof North Mill of 1804, part of the World Heritage site, and listed Grade 1. The great weir complex of 1796/7 originally powered the mills here. In striking contrast alongside is the East Mill of 1912. Synthetic yarn production (with electricity) only finished at the beginning of this year at Belper, in a 1960s mill. The party was guided around Strutt’s workers’ housing which dates from the 1790s.
Heage windmill, erected in 1792, has been superbly restored from an empty shell. In 1995 the county council hatched a plan to restore the mill to working order, at a cost of around £400,000 with grants from HLF, WREN and EH, and in 2004 grain was again milled after an 80-year lapse. Morley Park ironworks features two fairly complete blast furnaces, well vitrified, now standing on a prominent hillock because the entire area around has been open-casted.

After the conference dinner the AIA Awards were presented including publication awards for the Staffordshire IA Society's journal and the Society for Lincolnshire History & Archaeology's gazetteer of sites. Unfortunately, the main fieldwork and recording winners were unable to be at the conference to receive their award, but the initiative award was presented to the Norfolk IA Society for their work on the production of Thermos flasks in Thetford, and the student award to a Birkbeck College adult education class for their work on an Easton & Amos steam engine and its associated equipment on a model farm at Wrotham Park near Potter's Bar in Hertfordshire.

On the Sunday morning the initiative and student fieldwork award winners gave short talks on their recording work on the 1964 Thermos factory and the Wrotham Park engine. These were followed by Keith Falconer who summarised current developments by English Heritage, whose recent acquisitions include Ditherington flax mill at Shrewsbury, the block mills at Portsmouth dockyard, and Chatterley Whitfield colliery. English Heritage is also involved with diluting the barmy mass demolition policies of the government, and the creation of a conservation area in Birmingham’s jewellery quarter to encourage regeneration.

There followed the AGM of the Association, with the election of Council officers, a presentation of the future strategy from Barry Hood, Secretary, and a report on finances by Treasurer Richard Hartree. Dates for next year include the Ironbridge weekend, on 8-9 April; AIA Alsace trip, April 24-29; AIA-sponsored Brunel 2006 celebrations in Bristol 3-9 July; and the annual conference on the Isle of Man, 9-10 September, with the next AGM set for 10 September 2006.

Dr Mike Nevell concluded the morning by delivering the Rolt Memorial Lecture entitled ‘Industrial Archaeology or the Archaeology of the Industrial Period? Recent Trends in Industrial Archaeology Research’. The essential theme was the need for many industrial archaeologists to move away from the study of processes to the wider awareness of the place of any particular industry within its social and landscape environment. Mike gave us many illustrations of the new approach to industrial archaeology, and recommended a number of books that incorporate the new research. There ended the official conference.

That afternoon one trip visited Derby's 1839 roundhouse (so small by later standards), then a walk over the station (rebuilt to 'supermarket style' in 1985), followed by a coach tour of various railway sites around the city, including the
huge GNR goods warehouse and adjoining hydraulic engine house, and the only works in the country still building rolling stock (Bombadier transportation, ex Metro-Cammel). Those visiting Long Eaton and Shardlow saw tenement lace manufactories, on either side of the canal. These buildings are still in use for industrial purposes. Next, to the MR sheet stores at Trent Lock basin, where all the railway’s tarpaulins and sacks were stored and repaired, employing 200 at the turn of the twentieth century. The site retained its former buildings when redeveloped in the 1960s. Finally, Shardlow canal port was visited. The third trip went to the picturesque site of Darley Abbey, where the 1783 Long Mill, rebuilt after a fire in 1788, is now let out to various business uses. Here there is a weir on the Derwent, riverside walks and the only remaining bit of the ‘abbey’ being a licensed hostelry. Housing at Darley Abbey was also examined. Next, to view Rykneld Mills in Derby, now converted to student accommodation.

On Sunday evening Lynn Willies gave a talk on lead mining in the Peak, with the emphasis on Magpie Mine, which opened in the 1630s, probably didn’t show a profit until 1819 and finally finished in 1853, killed off by cheaper Australian lead and a big fall in demand. However, one mine still works for fluorspar and two are due to start for barytes.

Monday’s two visits both encountered poor visibility because of low cloud! Those on the Peak District mining trip started in the museum (centrepiece of PDHMS) and the Temple Mine at Matlock Bath, followed by the Magpie Mine and excavations at High Rake Mine near Great Hucklow. The second party visited Caudwell’s Mill at Rowsley, owned by the Duke of Rutland, and leased in 1874 to the Caudwell family, who worked it until 1978. A charitable trust restarted milling in 1981. The mill contains a very diverse collection of milling machinery, all superbly explained and maintained, and the complex has a café, craft workshops and a smithy. From there to the Hope Cement Works, with lunch in the canteen. Using the coach, the party saw the well concealed but massive quarry where limestone is gouged out for burning into cement. It first goes through a crushing mill and thence by conveyor belt for more than a kilometre to the kilns. The works produces 1.3 million tonnes of cement a year, or 10% of the UK total. There are two rotary kilns, each 70 metres long. Coal consumption is supplemented by burning waste tyre chips, ton for ton, to produce the required 1,450 degrees C temperature. Both trips met up for an evening at the National Tramway Museum at Crich, where we dined sumptuously in the Red Lion after enjoying conducted tours of the depot and a ride on an ex-London Transport double-deck car.

One of Tuesday’s field trips went to Cromford for a tour of the main mill and site. After lunch delegates dispersed to one of two sites. One was Masson Mill, part of which has been adaptively re-used as a (free) car park, whilst the original part houses a museum and retail village. The other was the Lumsdale Valley, with a conducted tour taking in the remnants of eighteenth and
Viewing the twin rotary cement kilns at Hope

Photo: Steve Dewhirst

These fans are used to cool the exterior of one of the rotary kilns at Hope cement works

Photo: Peter Stanier

On the roller mill floor at Caudwells Mill

Photo: Peter Stanier

The Midland Railway Sheet Stores and canal basin at Long Eaton

Photo: Michael Messenger

Plesley Pit was opened in 1873 by the Stanton Iron & Coal Co. and rebuilt in 1922. The winding engine remains

Photo: Steve Dewhirst

A London tram waits to receive AIA passengers at the Crich National Tramway Museum

Photo: Michael Messenqer
nineteenth-century water-powered mills. The area is leased to the Arkwright Society who have carried out stabilisation work and dredging of the system's biggest millpond (a flooded quarry). Beside the stream are stone cottages, originally converted from a smelter, and wheelpits having the deepest tailraces I have ever seen. Mill building started in the seventeenth century; the last, a bleachworks, closed in 1929. At the bottom of the valley are remains of a stone tramway.

The alternative trip took in the National Stone Centre near Wirksworth, which features the Millennium dry stone wall, each part built in the style of every separate county in England; then on to Middleton Top on the CHPR where the 1829 winding engine was turned over by compressed air. It hauled wagons up the incline until 1963 and is the last remaining railway winding engine still in its original house. After a visit to the interpretative centre at High Peak junction (the foot of Sheep Pasture incline), the visit terminated at the Cromford Canal's Lea Wood pumping house, which was featured on the cover of IA News 128. The 1849 engine has been restored to steaming condition by the Canal Society and the Middleton Top engine group. It had been the most glorious sunny day. In the evening, Philip Riden discoursed on industrial housing in the coalfield.

Wednesday offered North-East Derbyshire, or the Erewash valley. The first trip started at Pleasley Pit, where volunteers have restored the twin-cylinder north winding engine of 1904, once derelict in a roofless house. They are now working on the 1922 south engine. From there to Bolsover, to view the model village built by the colliery company to provide 'Coronation Street'-style living (lots of locals came out to stare), and then into Chesterfield to tour Clayton's tannery. Thai water buffalo skins being 'processed' spent 12 weeks passing through very dubious-looking liquors contained in tanning tanks used continuously since 1875, then progressing to become very high quality leather, amongst whose uses are the making of every cricket ball used in UK test matches. The trip concluded with a wade through waist-high nettles at Unstone, where resides a bank of 48 back-to-back coke ovens in various states of dereliction, the colliery having closed in 1884.

The Erewash valley tour started with a walk in Ilkeston, viewing railway and textile sites. On to visit the Midland Railway centre at Butterley, hosted by their archivist, where dwells the superb double-frame Kirtley 2-4-0, which in its last days worked as Birmingham New Street pilot, under BR ownership. Attendees rode on the narrow gauge line, built in the trackbed of the Butterley company's internal railway, a re-working of the original horse-drawn tramway. The restored company houses of 1790 were visited next – to be stared at by the inhabitants! The tour finished at the mid-nineteenth century model village of Ironville, complete with cast-iron street nameplates made in the works. The county also boasts a Coalville and a Woodville.

For the final evening lecture Janet Spavold talked on the pottery industry. A fourteenth-century tile kiln has been discovered recently on
Clearing river weed prior to starting up the turbines at Caudwells Mill

Group at Caudwells Mill. The AIA had a full tour of the roller mill

The recently restored Heage windmill milled grain for the first time in 80 years in 2004

the Harpur-Crew estate at Calke Abbey. These kilns and their later derivatives were used at Calke until 1939, when they were thought to be in danger of guiding German bombers with their flames. The cholera and typhoid epidemics from the 1830s onward were the big fillip to the industry and Janet then showed slides of ornate and early water closets. An automatic flushing device was incorporated early on, to avoid having to teach the common labouring classes how they worked.

The last day saw us all enjoying conducted walks by the main local conference organisers Mark Sissons and Ian Mitchell around the Ticknall limeyards and route of the 1802 tramway which the Calke Abbey estate subsequently acquired. Kilns in various states can be found and, of course, everyone marched through the tramway's cut-and-cover tunnel, built so the abbey's occupants didn't have to see it. After this excellent excursion, the remainder of the day was spent at the Rolls Royce aero engine factory. A 'heritage' section contains examples of the engines that achieved notable advances in the aviation field, and normally the Silver Ghost AX 201 lives here. Following an explanatory tour, we were let loose in the heritage trust museum, where an enormous collection of aero engines and some Armstrong Siddeley cars are on view. Finally, we visited 'Marble Hall', Rolls Royce's Nightingale Road factory centrepiece which was rebuilt in 1938 to impress important customers. It contains a very fine stained glass window commemorating the company's war dead.

So ended an outstandingly good conference, with first rate accommodation, excellent food (and plenty of it), memorable works visits, and even the weather clerk co-operated.

AIA Annual Conference 2006
on the Isle of Man
based at Douglas
8 – 14 September 2006

Details when available from
AIA Liaison Officer
(address on page 2)

ALSACE AWAITS
AIA SPRING TOUR
24 – 29 APRIL 2006

A guided coach trip in this delightful part of France based on Strasbourg, including a visit to Mulhouse. For further details please contact Paul Saulter, 80 Udimore Road, Rye, Sussex TN31 7DY

VISIT THE AIA WEBSITE
www.industrial-archaeology.org.uk

Our website contains information on the Association for Industrial Archaeology, including Membership, Abstracts of Industrial Archaeology Review, Awards, Conferences, Affiliated Societies and Sales. The Diary gives notice of events, day-schools and conferences, often in more detail than can be published in Industrial Archaeology News. Links give access to other societies, museums and organisations in the world of industrial archaeology.
Industrial Archaeology in Antarctica

Tourism to the Antarctic Peninsula, South Georgia and the Falkland Islands is fast developing. It is now relatively easy, for a price, to spend time following in the footsteps of explorers, scientists and whaling industry workers who, until recent years, were the only people to visit this cold, inhospitable but very beautiful part of the world. Many may think that the wildlife and scenery are the principal attractions but there is much to fascinate those interested in the remains of an industry.

John Porter

Even after the advent of pelagic factory ships, the processing of whale carcasses was still undertaken at shore stations, and both systems needed substantial installations for maintenance and repair, supplies and storage. Although some transfer of plant took place as stations closed down, much of the infrastructure was just abandoned. The three final stations on South Georgia, which lasted to the mid-1960s, were left ready for the following season - but it never happened. Reduced returns from selling the product, combined with the folly of destroying the supplies of raw material, meant that the Antarctic whaling industry lasted only 60 years. Even now, nearly 50 years later, there is no evidence of the blue whale population recovering, though other species, such as the hump-back, are obliging enough to put on a show for passing cruise ships in the Gerlache Strait.

When whaling ended, there were six whaling stations extant in South Georgia. One of the largest, at Leith Harbour, was owned by the British company Christian Salvesen. It was this company's negotiations with an Argentinean salvage contractor that led to the latter's illegal landing on the British territory of South Georgia and triggered the Falklands war of 1982. Prior to that, the stations, fully stocked with engineering spares of all types, had been a ready source of such material for passing ships. When the Argentinean military forces invaded South Georgia at Grytviken, a short walk from the British administrative base at King Edward Point, they did a fair amount of damage. Once they had been ejected, the British military were in sole occupation of the island till 2000. During this period, they conducted training exercises leading to further damage including the burning to the water-line of the American-built wooden barque Louise. She was built in 1869 and came to the island as an accommodation vessel during first construction of the Grytviken station in 1910.

The military have now gone and administration is in the hands of the civilian Government of South Georgia. They are trying to develop tourism in a caring, controlled and safe way, while recognising the attraction of the remains of the abandoned stations. However, there are two problems. Whale processing, and surviving the climate, called for vast quantities of heat all round the station. Steam heat was distributed in a pipe system from central boiler plants but, in common with any plant of this era, the insulating material was asbestos. The second problem is the weather. Until one has experienced a katabatic gust, one has no real idea of the force that such a wind can exert. The buildings have wooden frames clad in corrugated sheet steel. The wind soon finds a weak point, allowing rain and snow to get at the timber and the fastenings. The buildings are falling down and the thought of meeting a sheet of flying steel at waist height is definitely off-putting. At all stations except Grytviken, the government's solution has been to completely prohibit approach within 200 metres of the buildings. As landing from cruise ships is only under strict supervision, this ban is observed.

Grytviken and adjacent King Edward Point are the only regularly lived-in places on the island. The decision was made to allow visitor access to the whaling station after the asbestos was removed and the buildings made safe. The manager's house was restored and is now a very interesting museum. The Norwegian-style church has also been repaired and the cemetery, with Shackleton's grave, has been tidied up. In general, the other buildings have been removed, leaving what remains of the plant exposed to the elements. Diesel generator sets, water turbines, steam boilers, blubber and meat cookers, whale oil separators are sitting in the open. Over the years these items had already lost all their bits, including builder's plates and every bit of non-ferrous metal. The flensing plan has been covered in gravel and the three whale catchers, two of which had lain partly sunk for many years, have been pulled further ashore and are upright. They are in very poor condition and are not accessible. The total cost of all this work must have been several million pounds.

It is thus clear that the situation of all these stations is rapidly declining one way or another. Nothing stands still in that climate but we can, at least, get some feel for what was there at Grytviken. This impression is enhanced by the availability of a number of books with fascinating photographs of the whaling stations in full production, but they are just that, a selective picture book account. No fully comprehensive and accurate survey of the stations was available. The need was recognised in Norway in the 1980s and three extended field trips were made to the island between 1989 and 1997, financed by the Norwegian Research Council.

The results of this work have now been published in a book by Bjørn Basberg, The Shore Whaling Stations of South Georgia - A Study in Antarctic Industrial Archaeology. It is a well-produced hardback of 225 pages, with detailed descriptions of each station and many shots of the current or recent scene in colour. The history is not neglected and there is good coverage of how the place used to be and what it was like to live and work there. Each site was surveyed in detail, using photogrammetry supported by theodolite surveys. Each building was surveyed internally in detail to establish what was inside –

Babcock & Wilcox sectional header boilers at Grytviken

Photo: John Porter

Minlrees diesel generator sets on the site of the old Grytviken power station. Seals and unwaked visitors are in the background

Photo: John Porter
volcano and was very popular from the 1910s as a base for factory ships which processed the whales in the water. For this they needed calm conditions and an ample fresh water supply, both of which were found in the caldera, surrounded by a ring of hills. The entrance through a gap in the ring, known as Neptune’s Bellows, is very dramatic.

This is the island where Sir Hubert Wilkins made the first flights in Antarctica in 1928 and 1929. He even landed an Austin car to run about in, while he lodged in comfort in a former passenger liner converted to extract oil from whale carcasses. A shore base was built to take the blubberless carcasses and extract more oil from the meat and bone. Volcanic activity has not ceased at Deception Island and a lava flow has covered much of the flat ground where the station was but there remains a building used as a hanger (post-dating Wilkins), a living block of very Norwegian origin and a collection of tanks, boilers and winches. The remains of a floating dry-dock emerge from the black sand of the beach. Over on the Antarctic mainland, a penguin and seal spotting trip in the small craft used for landing on beaches circumnavigates the wreck of a ship destroyed by fire in 1912 while processing whale carcasses alongside. Corrosion of the steelwork has been slow, but not a piece of non-ferrous metal was visible.

Is it worth the journey? Well, it certainly was for me. It is a very tough world set in very rough seas, but fabulous to see and experience. There is much to see for those interested in industrial history. Even the scientists are taking up catering to tourists. The old British research base at Port Lockroy has an interesting pair of Enfield generators from the post-WWII period plus electronic instruments of the day; all defended by a large crowd of very interested penguins.

Given the circumstances and the dangers to casual visitors to the whaling stations, I feel we should be grateful to the Government of South Georgia for making Grytviken accessible, albeit in a severely altered way. It is difficult to suggest what else they could do. But if you can’t make the trip, or don’t fancy being sea-sick to get there, at least read Bjørn Basberg’s book, *The Shore Whaling Stations of South Georgia – A Study in Antarctic Industrial Archaeology*, Novus Forlag, Oslo, 2004, ISBN 82-7099-394-8. It is available from the Whaling Museum in Sandefjord, Norway, www.hvalfangstmuseet.no.

**The Grytviken museum has the factory whistle from the Stromness station. It was this whistle that Ernest Shackleton heard after crossing the mountains from the west side of the island at the end of his epic journey to get help for his crew**

**Pulson wheel turbines on the baseplate of the old power station at Grytviken. Water is spraying from leaks in the supply pipe coming down from the dam**

**Photo: John Porter**
Don’t miss out on an AIA Publications Award in 2006

The AIA wishes to encourage local societies to publish IA material to a high standard. There are three awards available, for the publication of journals, occasional books or leaflets, and for newsletters. It’s very simple – all you have to do is submit your entry by 31 March 2006 and the judges will do the rest. Please contact the Liaison Officer for more details (address on page 2).

AIA Essay Awards

Two prizes are available – a general prize and a student award. Essays must be submitted by 31 March 2006, but first contact the Liaison Officer for more details (address on page 2).

£500 Reward

The AIA, in conjunction with Dorothea Restorations Ltd, offer an annual award of £500 and a handsome Plaque to the project considered the best of that years entries.

To be eligible for entry projects must be concerned primarily with the conservation of a site or object of industrial, agricultural or domestic archaeological interest.

Initial expression of intent to submit a detailed application is achieved by completing a simple Questionnaire, which can be obtained from the award co-ordinator, David Lyne, 10 Somerville Road, Leicester, LE3 2ET, Phone/fax 0116 29 19 706. e-mail davidlyne@ntlworld.com, who will also ensure that you receive a full copy of the rules and award information.

Entry for an Award is made by completing the questionnaire, followed by a detailed submission at a time decided by yourselves. Applications received before the end of April 2006 should be in time to be considered for the award for that year. Applications received after this date may have to be deferred until the following year.

The winner will be notified by 31 July, in time to arrange for representation at the AIA conference in August or September, at which two places, one of which is complimentary, will be reserved, for the presentation.

DO NOT DELAY, ENTER TODAY!

ANNOUNCING THE THREE FIELDWORK AND RECORDING AWARDS FOR 2006

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 over a decade.

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

As well as the main award there is also the Initiative Award for innovative projects, e.g. those from local societies. To encourage the future industrial archaeologists, there is also a Student Category.

THE CLOSING DATE FOR ENTRIES IS 1ST MARCH 2006

Successful Entries will be notified in July

The successful authors will be invited to attend the AIA annual conference in Douglas to collect their award in September

Further details from:
Fieldwork and Recording Awards, AIA Liaison Officer, School of Archaeological Studies, The University, Leicester, LE1 7RH
AIA Fieldwork and Recording Awards 2005
There were four entries for this year’s awards. The Main Award went to an excellently produced 
Mountains and Orefields: metal mining landscapes of mid and north-east Wales by Nigel Jones, Mark Walters and Pat Frost of Clywd-Powys Archaeological Trust (CBA report 142, 2004 ISBN 1-902771-47-8). The report is an accumulation of 10 years of research that significantly adds to the knowledge of these important mining regions. A summary of the history of mining is followed by a detailed description and interpretation of sites in mid and north-east Wales. A variety of techniques were used including air photography, EDM surveys, excavations, measured building recording and photography. Many of the plans and photographs have been reproduced within the report. A final section of the report looks at the management of mining sites, many of which are in marginal areas. Finally there are gazetteers of sites and a glossary of mining terms. Unfortunately, the authors were not able to attend the conference to receive their award.

The Initiative Award went to Norfolk Industrial Archaeology Society (NIAS) for recording the production of Thermos flasks in Thetford before the plant closed in 2000. When Thermos Ltd decided to transfer their production to China, NIAS members were allowed to enter the site to film the process and talk to staff, and the result is a fascinating video of the process and a tape of an interview with an employee. An accompanying report (originally published in the Society Journal 2001) written by Peter Brown and Derek Manning gives a brief history of Thermos followed by a description of the processes needed to make a vacuum flask. There are also plans and photographs of the site.

The Student Award went to a group of adult students attending evening classes in Industrial Archaeology at Birkbeck College, hosted by the WEA of Cuffley and Barnet. The Steam Engine at Wrotham Park (ISBN 0-90504236-0) was written by Denis Smith, Ian White, Nigel Picken and Brian Strong, and published by GLIAS. Home Farm was built between 1855 and 1859 by George Stevens Byng, probably one of the last following industrial principals as advocated by such publications as Loudon’s Encyclopaedia of Agriculture. A central feature of the farm yard was the engine house which housed an engine that could be used for driving threshing and winnowing machines, grinding, bruising and cake-crushing machines and saw mills. The Grasshopper engine at Wrotham Park, a variation of a beam engine, was supplied by Easton & Amos in 1856 for £890. 3s. 6d. The report gives details of the engine as recorded in historical documents as well as the results of a field survey and measured drawings.

The final entry, from K.H. Dixon (student) looked at ‘The rise and fall of the Asbestos Industry with special reference to Rochdale’. The essay traces the development and history of the Asbestos Industry through the firm of Turner Bros. Asbestos Company, Rochdale. It had been established as a cotton weaving company in 1871 but by the 1960s had become one of the largest Asbestos textile manufacturers in the world. The essay also considers Asbestos products especially those used as packing and jointings for engine and pumps, and also considers the health implications of using and producing such products. The Initiative and Student Award winners attended the conference dinner in Nottingham and gave short presentations on their work on the Sunday morning.

Victoria Beauchamp

AIA Publications Awards 2005
Two awards were presented at this year’s annual conference. The Publications Award winners were Jim and Anne Andrews from the Staffordshire Industrial Archaeology Society for their recent journal which was devoted to the Sandon Limekiln project. The project includes historical research, maps, drawings and excavation results, and is a good example of what local IA societies are able to publish.

The Occasional Publications Award went to Neil Wright for Lincolnshire’s Industrial Heritage – a Guide, which was published by the Society for Lincolnshire History & Archaeology in 2004 in a clear style similar to that used by the AIA’s own gazetteers. More details can be found in the review in IA News 132, Spring 2005.

A no award was made for newsletters this year. The Publications Awards are aimed at encouraging local societies to publish IA books, pamphlets journals or newsletters to a high standard. The AIA would very much like to receive more entries for 2006, local society editors please note!

Isle of Man 2006
The Association’s Conference next year will be held on the Isle of Man and based in Douglas. The dates will be Friday 8 September to Thursday 14 September. There is a wealth of industrial archaeology on the island – mining, mills, transport and tourism – and we are receiving enthusiastic co-operation from local organisations, such as Manx National Heritage and the Department of Tourism. The conference will be hotel based using the Claremont Hotel as the main venue where lectures and the AGM will take place. Accommodation will also be available at the nearby sister hotel, the Chester House, where room prices are a little lower. The options will be on the booking form next February. The standard of hotels on the island is very high but we have been able to negotiate room rates so that we expect the cost of the conference to be little or no higher than our university-based venues have been.

Unlike universities, double rooms will be readily available and sharing a room will be the most economical way to attend. Partners who do not normally come to conference may find the attractiveness of the Isle of Man an incentive to join us! If members wish to stay on longer, either before or after the conference, we have negotiated that the same preferential room rates will be available.

There is plenty of competition in airlines flying to the island with flights from at least a dozen UK airports. Booking early will be the key to securing the best prices. The Isle of Man Steam Packet Company sails from Liverpool and Heysham and the return fare this year was £30. I understand the combined rail and sail tickets are available from London and Birmingham.

The AIA was founded on the Isle of Man in 1973 and it is time we went back!

Full details will be sent out with the February IA News as usual.

Michael Messenger

Internet IA
The editor would like to hear from anyone interested in submitting a regular short piece on IA-related websites, reviewing their content, recommending good sites or perhaps heavily criticising others. Please get in contact!

VISIT THE AIA WEBSITE
www.industrial-archaeology.org.uk

Jim and Anne Andrews of the Staffordshire Industrial Archaeology Society receive the Publications Award from AIA President Angus Buchanan at the annual conference in Nottingham
The Battle of Saxby

During Jenny Allsop’s EMIC 62 lecture on Melton’s Industrial History, back in October 2001, she briefly mentioned about the Battle of Saxby, not to be confused with the Battle of Bosworth. In the 1840s, the developing Midland Railway Company, proposed a new rail route between Leicester, Syston and Peterborough via Melton Mowbray and Stamford. This required the purchase of land belonging to the Earl of Harborough who resided at Stapleford Hall close to Melton. The Earl was already in dispute with the Cottesmore and Belvoir Hunts, who were banned from crossing his estates. He was well known for his views on other people invading his property. Hence when the Midland Railway wished to survey the route, he erected notices, stating that ‘any Railway Surveyors would not be permitted, any trespass on his land, would be resisted by force.’ Not an idle threat, as the first railway men tried to begin the task of surveying. So began a dispute which lasted for about three years: The Battle of Saxby.

The first group of Midland Railway officials and surveyors were confronted by many estate workers who defended the land stubbornly. Several arrests of railway men were made and they were taken under armed escort to Cold Overton Hall which is several miles east of Melton to wait for the local Magistrate. He was not available, so they were then taken by cart to Leicester Gaol, not Welford Road. Fortunately several escaped when the cart overturned.

The following day, battle again. The railway company reinforced its numbers using its ‘strong arm navvies’ and Lord Harborough mobilised extra men, plus erecting barricades. Needless to say blows were exchanged, but before the situation worsened, the police arrived and threatened to arrest anyone guilty of assault. Meanwhile, a party of surveyors had managed to start their work but were discovered and had their equipment confiscated by the Earl. Later in the day another party of surveyors tried to force the barricade, but were discovered laying chains and forced to retreat.

The Midland Railway offered to call a truce if the dispute could be settled by a local magistrate, who in the 1840s had power to make judgement. But the eccentric Earl would have none of this, and made arrangements to form a mounted horse unit, using the estate’s heavy ploughing horses, plus installing cannon which was acquired from his yacht, on the Oakham Canal towpath.

On the morning of 16 November 1844, the railway company made a raid and the usual gun salutes, but the situation, which acted as a diversionary move, allowed the company to attack at another point using over 100 men. These managed to survey a considerable area before the mounted horse reached them. A nasty encounter followed, when several of the railway men were knocked out by a lock keeper known for his boxing skills. Afterwards, all Hell broke loose when ‘The spikes of the Railway were driven into the defenders of the Park.’ (History of the Midland Railway). Both sides suffered many injuries, but eventually the railway men withdrew, leaving several prisoners, who were later released by the Earl’s steward after their names were recorded.

In the Spring Assizes of 1845, two cases of assault were heard when two railway employees were convicted of causing a riot and sentences were passed: a month in jail, plus a fine of one shilling. I presume the company paid the fines. In a further case, the Earl was found guilty of causing assault, wrongful imprisonment, and of causing damage to the railway company’s equipment: a theodolite. He was ordered to pay £8 in damages.

Later that year, in November 1845, several outbreaks of violence led the company to apply for a new Act of Parliament, to change the route incorporating a severe curve, now known as Lord Harborough’s Curve, which is still used today by modern turbo diesel freight and passenger services. Remains of the Oakham Canal can still be traced alongside the present railway close to Melton, plus numerous examples of ridge and furrow which have lain undisturbed since the days of the railway surveyors.

Today Melton is on the cross-country rail route linking the west to the east, with connections at Leicester and Peterborough for travelling north and south. Plans are in hand to provide a new direct service connection to Nottingham, but with the problems presently with Railtrack, who knows when the railway may recommence? At least the new test track at Old Dalby, currently being used by Virgin Trains, is providing a wonderful opportunity to maintain the railway tradition.

Excavations of early limekilns

Over the course of the year a community archaeology group has been excavating a number of early limekiln sites in the Craven District of North Yorkshire within the Yorkshire Dales National Park. One of the key aims of the project was to demonstrate that a proven late seventeenth-century limekiln excavated as part of a wider dig in 2003 was unique. The leader of the project, David Johnson, had been recording saw or clamp kiln earthworks across Craven, assuming that they would have the minimum structural form suggested by Michael Trueman in his limekiln typology (IA News 112). The kiln in question, the Broadwood kiln, had a very definite and permanent form with a carefully stone-lined and coursed bowl with a stone-built base and an external flue. The kiln was dated by archaeomagnetic and artefactual evidence.

Five sites were excavated over the summer of 2005, all showing the distinctive annular earthwork form of a saw kiln and all of them proved to be broadly similar to the Broadwood kiln in having a distinct bowl, some lined with stone, others having a compacted clay wall revetted with stone. All had a similar stoke hole arrangement and external flue. One of the sites had been modified at some point in its life with the older open bowl being replaced with a narrow cone-shaped bowl inside it. This latter bowl was also dated to the late seventeenth.
century by archaeomagnetic techniques.

These findings raise the question of what a sow kiln was; a primitive, unstructured bowl possibly used only once, or a structured kiln used for multiple firings. Permission is being sought to carry out a final excavation in 2006 of a site with identical surface form in a shallow moorland valley in the northern Dales called Bowkett Gill on the First Edition 6-inch Ordnance Survey map. This will surely settle the issue.

Two of the kilns excavated, in different parts of Craven, were found completely full with their last firing. The limeburners had gone to the trouble of getting the stone, breaking it to the required size, filling the kiln and firing it, only to walk away abandoning their kiln. This raises the issue of why, and to find two such kilns out of a sample of six must be extraordinary.

A further two kilns had a mysterious burial within them. Again, this is seemingly without parallel. In each case, after the kiln had been abandoned, a partial burial took place of selected disarticulated frontal bones, including the skull, from a horse. It was not the case that a carcass had been thrown into a convenient hole, and nor had the bones been discarded in this manner. Both sets of bones had been placed within the stoke hole after it had been cleaned out. One of the skulls was found in association with a tusk of a wild pig or boar, increasing the mystery. The sacred word ‘ritual’ comes to mind.

Once the project has been completed, a full report will be published.

David Johnson

Japanese Watermills

Japanese watermills are different very different, as shown in a book by Kenjiro Kawakami. Surprising as it may seem in a country with a high average rainfall and steeply sloping rivers, little use has been made of the available water power. In part this is because the staple grain is rice, so there is no need for an extensive grinding industry. Although rice is processed it is by stamps, and rice mills resemble small-scale versions of ‘Cornish’ ore stamps worked by caryms. However, rice by its nature is grown on the flat lower lands while the steep parts of the rivers are high in the mountains. There seem to be other minor reasons as well, such as the life of a mill is given as less than 100 years, suggesting the use of unseasoned wood, and a belief that a mill somehow abstracted the water, leading to bans or restrictions in areas where there was extensive irrigation.

The primary use for Japanese watermills seems to be to raise water for irrigation, using a form of scoop wheel (noria) with integral buckets. The water is only raised a foot or two, from the canal to the paddy field, and modern versions are usually made of stainless steel. Many of the mills using water as a power source employed a sort of turbine, stated by the book’s author to have originated in Japan. The design is similar to an Archimedian screw pump, but set horizontally and with the water driving the screw, from which a drive is taken to the mill. At one time these were extensively used in Toyama Prefecture on the west coast.

Another local variant is a rice mill powered by a tipping bucket at the bottom of a small cliff connected by rope to a stamp in a workshop at the top. This is probably the most unconventional in the book, but there are many other oddities to delight the enthusiast, including a miniature wheel in an irrigation channel with an internal net to wash potatoes! An incense-grinding mill is included and there are examples of other uses such as ceramics and saw-milling. There are also a couple of windmills, one is the conventional wind mill pump but the other is almost a toy about two feet high, balanced on a single pole and creating a vibration which drives away moles!

The illustrated paperback Japanese Watermills by Kenjiro Kawakami, 66pp, is published by Office Hans, 2-9-39, Hiro-o, Shibuya-ku, Tokyo, Japan 150-0012. (Price ??). The book is well produced with text in Japanese and English. Colour photographs and drawings illustrate each mill and there is a most useful outline drawing of 68 varieties of wooden water wheels the author has come across. It is altogether a fascinating book and one which should be on every mill enthusiasts bookshelf. As I said, Japanese mills are different!

Chris Irwin

Securing a future from the past

‘Spirit of the Miners’ is a £464,000 community regeneration project set up by Ceredigion County Council in west Wales. It sets out to create an identity for Northern Ceredigion using the legacy of metal mining as a theme for regeneration. The project will mainly focus on the human, social and community aspects of mining culture. In short, the very reason many uplands villages exist. Meleri Richards, the Project Officer appointed until November 2007, will have the responsibility of developing and marketing this identity within the area whilst also working with the local communities and businesses to develop potential projects.

‘Spirit of the Miners’ has created a grant scheme to provide communities with an opportunity to be inspired to develop projects using the theme of mining. This funding is made up of contributions from European Objective 1 European Agricultural Guidance and Guarantee Fund (EAGGF), Welsh Assembly Government’s Local Regeneration Funds, Countryside Council for Wales and Ceredigion County Council. This project development will provide all sections of the local community with an opportunity to gain a greater understanding and appreciation of the history and culture of mining in the area.

The grant scheme will help create opportunities for tourism, new jobs, community-led projects and new businesses. Its long-term aim will therefore be to preserve the memory of mining whilst creating an image that will become synonymous with the area. The grant fund will only be available for projects that are associated with the uplands metal mine heritage and the scope of projects that can potentially be supported is wide, for instance, ideas however traditional, modern or innovative may be initially considered. The project is time limited and the grant fund is now available on a first come first serve basis. Therefore to re-word a Welsh saying: ‘We must ensure for future generations the heritage that
was once ours.’

Meleri Richards would like to hear from all members of the Association who may be able to provide local knowledge, photographs or other general information that they think might be useful to the project. Furthermore if you have any ideas or suggestions on potential projects in the area or require general information contact 01545 574162 or e-mail: meleri@ceredigion.gov.uk. Further information can also be found on the website at www.spirit-of-the-miners.org.uk, which is currently in the process of being developed.

Farnham Pottery Award

The Surrey Industrial History Group’s 2005 Conservation Award has been presented to the Farnham (Building Preservation) Trust for the restoration of the kiln and associated buildings of the Farnham Pottery at Wrecclesham. The award was commemorated by the presentation of a plaque, at a ceremony on 16th July, to Mr David Graham (the Trust’s Chairman) by Prof. Alan Crocker (President, SIHG).

The Trust purchased the Pottery, including the one remaining kiln, in 1998 from the Harris family who had owned it since 1872. The kiln and its surrounding building have been restored and accommodation created for the craft group the West Street Potters. Much work remains to be done to restore and convert the other buildings to provide accommodation for craft activities.

The kiln is a rare, possibly unique, survival of a type similar to the medieval pattern, without the enveloping brick structure found in Staffordshire bottle kilns. The other buildings are constructed of bricks and tiles made in the pottery itself and, although strictly utilitarian, show ingenuity in making use of the materials at hand at a particular time, including those surplus to customers’ orders. The restoration preserves a rare example of a Victorian country pottery.

The Farnham (Building Preservation) Trust was founded in 1968 and has restored a number of buildings in the town. The restoration of the Farnham Pottery is its largest project, and will take a number of years to complete. For further details please visit the website www.farnhamtrust.org.uk.

Suomenlinna – The Island Fortress off Helsinki, Finland

The fortress Suomenlinna, ‘The Gibraltar of the North’, is one of the largest sea-fortresses in the world, and is built on six islands. The building of the fortress started in 1748 and for sixty years it was the largest fortress of the Swedish kingdom. After the 1808-09 war between Russia and Sweden, the fortress was for 110 years a Russian fortress and garrison. Joint British and French navies bombarded it extremely heavily on 9 August 1855 as a consequence of the Crimean War against Russia. Much damage was done but the Russians were allowed to retain possession of the fortress, and no landing took place.

From 1917, the year of the independence of Finland, it was a Finnish garrison until 1973 when civil administration took over. Sveaborg was the original name of the fortress, but the Finns translated that into Viapori, which was the name also used by the Russians. In 1918 the fortress got a new name in Finnish, Suomenlinna, ‘The Fort of Finland’. It has been a UNESCO World Heritage site since 1991.

The sheer scale and extent of the fortifications is overwhelming, and there are many remaining military buildings of great interest. The large dry-dock is thought to be the largest of its kind in the world and dates from 1751. The docks are still used for industry including wooden shipbuilding and repair, sail making and blacksmithing.

The many museums and visitor centre are mostly open from 10am to 5pm or 6pm. A visit should be made to the Suomenlinna Museum to understand the military and industrial history of the fortress, with a viewing of the multi-media show being a ‘must’. The main HKL ferry to Suomenlinna takes 15 minutes, and the islands are accessible at all reasonable times as around 850 people live on the islands as residents. For initial reading I recommend 'Look at Suomenlinna Sveaborg', Olof af Hällström, 'The estate of Olaf af Hällström', obtainable at the fortress and some bookshops in Helsinki.

Scottish ironwork in Co. Tyrone

With reference to the news from Scottish ironwork in IA News 134, pp 10-11, Bond’s Bridge in County Tyrone is plated ‘Alexe Finlay & Co. Contractors Motherwell Bonds Bridge 1895’. The approach spans have I sections marked ‘Middlebros’ but it is assumed the main span is Scottish. The bridge is in use but with a weight limit.

Michael Gould

Old chocolate

Terry’s chocolate factory in York has closed and production is being transferred to Europe. The building, where 2,500 people once worked, could be converted to offices, housing or even a hotel.

Olympic Games 2012

London being chosen for the 2012 Olympic Games might be good news for the construction industry, hoteliers, would-be athletes and hopefully Britain in general, but it is bad news for the local industrial archaeology. Already Stratford has lost much of interest to AIA members and now in East London even items listed Grade II will be at risk. Much of the Bow Back Rivers area as we know it may well disappear completely. Pay a visit here and see what is left while there is still time.

Robert Carr

End of Somerset shoes

C. & J. Clark’s have closed their last westcountry shoe factory at Dowlish Ford near Ilminster in Somerset. Shoe-making finished at their main site at Street in the same county back in 1992 (this is now a popular shopping centre). The firm once had over 20 factories in Britain, employing many thousands, but such has been the effect of foreign competition that they now retain...
just one factory making K-shoes near Barrow-in-Furness. Clarks came to Dowlish Ford Mill in 1965. Its earlier history saw woollen and silk manufacturing until 1840 when flax and hemp yarn were spun using steam power. The factory spun yarn in 1936 for the carpets of the new Cunard liner Queen Mary, but the site was given over to making thermionic valves for Standard Telephones & Cables during the Second World War.

Jan Verbruggen (1932-2005)
Dr Jan Verbruggen died on 30 May after a fighting long illness, and just a month after receiving his PhD. This work, based on correspondence in the Boulton & Watt papers between James and Watt and Jan Daniel Huichelbos van Linder, has been described as a ‘milestone in the history of steam technology.’ Jan Verbruggen was closely involved in the restoration of the famous 144-inch drainage pumping engine at Cruquius in the Netherlands, and was well known to many fellow members of the AIA, Newcomen Society and Trevithick Society.

Sowerby Bridge warehouses
Two warehouses refurbished by British Waterways at Sowerby Bridge Wharf in Halifax won the Historic Environment award in the Waterways Renaissance Awards 2005. The eighteenth-century Grade II Listed buildings have been refurbished for offices, artisan workshops and a planned restaurant, while a dock has been retained as a boat repair yard for Shire Cruisers. The £2.2 million project was funded by British Waterways and Calderdale Metropolitan Borough Council, the Heritage Lottery Fund and Yorkshire Forward.

Southend Pier aflame
A fire on the night of 9 October has destroyed buildings including a pub and railway station on the world’s longest pleasure pier at Southend. The pier was built in 1889 with subsequent extensions bringing it to a length of 1.34 miles. There were at least three serious fires in the second half of the twentieth century. It is proposed to rebuild the damaged section of the pier.

Dragline open days
The friends of St Aidan’s BE 1150 Dragline are holding three open days next year when visitors can examine closely the largest preserved walking dragline excavator in Western Europe. The machine is at St Aidan’s opencast coal site, Swillington, Leeds. The dates are 8 April, 17 June and 9/10 September 2006. For details contact the Secretary, Dr Ivor J. Brown, 95 Manygates Lane, Sandal, Wakefield, WF2 7DL, or see the website www.iarecordings.org/dragline/.

Explosive discount
Gunpowder, Explosives and the State: A Technological History, edited by AIA member Brenda J. Buchanan, is to be published in February 2005. The technology of gunpowder making has, until recently, been neglected by historians, viewed especially by military historians as a ‘given factor’. The earlier volume Gunpowder: The History of an International Technology (1996), arranged by the present editor, and with many of the same contributors, marked a significant step in the recognition of the subject’s importance. The new volume will present the current and original research of these scholars, who meet regularly under the auspices of the International Committee for the History of Technology. A pre-publication discount price of £41.25 for the c450-page hardback (ISBN 0 7546 5259 9) has been offered by Bookpoint Ltd, Ashgate Publishing Direct Sales, 130 Milton park, Abingdon, Oxon, OX14 4SB, 01235 827730. Quote reference SC1281.

Great Britain floats again!
One of the aims of a restoration project costing £11.3 million has, hopefully, solved the problem of preserving the iron hull of the SS Great Britain in its drydock at Bristol. The lower part of the hull is sealed in a dry atmosphere by a special glass roof across the drydock. The dry air should prevent any moisture (created by the visiting public!) from continuing to rust away the seriously corroded iron plates, while a thin layer of water on the glass gives the appearance that the ship is afloat.

Mountains and Orefields – the 2005 AIA Fieldwork and Recording Award Winner
This year’s Main Award winner was Mountains and Orefields: metal mining landscapes of mid and north-east Wales by Nigel Jones, Mark Walters and Pat frost of Clwyd-Powys Archaeological Trust (CBA report 142, 2004 ISBN 1-902771-47-8). The book emerged from a study of relict mining landscapes in mid and north-east Wales undertaken by the three authors and funded by Cadw: Welsh Historic Monuments. Earlier studies of the metal mining industry in Wales have tended to focus on the often meagre surviving historical evidence of the industry, or on the social history of mining communities in mid Wales. Here, for almost the first time, the emphasis is on the impact of the industry upon the landscape and on what the often complex physical remains surviving at ground level have to tell us about the ways in which the ores were won and processed on site, which in the words of the book ‘represent a dialogue with the landscape and its resources that lasted for almost 5,000 years from the Bronze Age to the early 20th century but which has now been largely concluded.’ The landscapes are viewed by the authors as ‘a testament to human endeavour, sometimes on an heroic scale, but often with a view to short-term gain and oblivious of its impact upon the natural environment’ but which nonetheless ‘have now become valued in their own right, cherished for the human stories they have to tell and the lessons they have to teach.’

The fieldwork which formed the basis for the publication consisted of detailed surveys of the more important and better preserved mining landscapes in mid and north-east Wales. The various structures and earthworks were all planned using digital total station surveying, the survey software enabling a contour plan to be produced from the same data. In all, ten sites were surveyed in mid Wales and a further five sites in the north-east, including a large-scale survey of one of the best preserved mining landscapes at Eisteddfod, near Minera.

The detailed nature of the ground survey, together with extensive use of aerial photography, has enabled a much better understanding of the way in which the various sites developed and functioned. The nature of the sites varied considerably and while many have well preserved stone buildings, others are now little more than a complex of earthworks. Sites with better building preservation include the likes of Nantia, which has timber dressing floors suspended above a stream, and Cwm Elan, where a full range of buildings survive from the main phase of activity.

The book, which is richly illustrated with plans and aerial photographs, will be of interest to all readers with a broad interest Welsh landscape history as well as those with a specialist interest in industrial and mining archaeology and history.

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Wales

Castlering Archaeology has been involved at two contrasting sites of IA interest in Flintshire and Denbighshire during the last year. Between October 2004 and April 2005, historic building recording was undertaken on the site of the former Dee Iron Works building on land off Boundary Lane, Saltney, Flintshire (SJ 385648), which is to be demolished in advance of residential development. The site formed part of Saltney Marsh, prior to the canalisation of the River Dee and subsequent land drainage schemes. The site remained undeveloped until 1847, when with the advent of the railways, Henry Woods & Company established the Dee Iron Works on the site. The Iron Works is considered to be the first large-scale works to be established in Saltney, following the rail links established by the Great Western Railway, which made the transportation of heavy goods possible both by rail and ship. The Iron Works were established by Henry Woods & Company, which had been founded in 1780 in Stourbridge.

The Saltney works were established for the manufacture of cables, anchors, scrap hammered used, forged iron, ship's windlass, castings, shovels, spades, anvils, vices, nails and all manner of chains.

The company received the prize medal for their chain cables at the Great Exhibition in 1851 and in the following year their Trotman's Patent Anchor won awards at the anchor trials at Hull Dockyards. A later improvement on the Trotman was patented as Wood's Improved Solid Palm Anchor. In 1857, Isambard Kingdom Brunel commissioned them to make three large anchors for his Great Eastern steamship. The Saltney works had become something of a show-piece in the manufacture of anchors.

During both world wars, the company manufactured chain cables for the Admiralty, for battleships and cruisers. The company were one of the largest employers in the district, employing over 500 men on times. The company also owned considerable property in Saltney, including 50 cottages, the Anchor Hotel and Wood Memorial School. The company's name was immortalised in streets such as Wood Street, Cable Street, Anchor Row and Chainmaker's Row.

In 1964, Henry Wood's Company was purchased by the Braden Chain & Engineering Company, who transferred production to their Cradley Heath works, causing the Saltney works to close down in 1964. The entire premises were subsequently purchased by the Chester Chain Company with the objective of servicing and testing pulley blocks, chain slings etc. under the Board of Trade Regulations. The Chester Chain Company continues to occupy the first ironworks building built by Woods in 1847.

The historic building recording found that, although the surviving building on site was considered to be of particular historic, architectural and archaeological interest, the body of Wood's 1847 red brick building was now seriously bowing, particularly on the southern side. The northern elevation is the 'showpiece' of the works displaying a three-centred 'wagon arch'...
towards the west end, now fitted with an opening metal door and four surviving semi-circular headed arched entrances towards the east. The semi-circular theme is continued in the upper levels of the building where a series of ‘demi-lune’ openings are continuous along the north, south and west walls. The continuous slate roof has a raised apex on the east side, supported by a series of extended Queen post trusses, consisting of a tie beam from which two queen posts rise, each carrying a side purlin. Inclined blades rise from the tie beam to the queen posts, which are jointed to a mid-height straining beam. This particular structural form was presumably chosen to give greater height in the roofspace. The machine cut timbers have had metal braces fitted to increase stability.

The shell of the building remains much as it was in 1847, although several areas of the original brickwork have been ‘patched’ and repointed over the last century to ensure continued use. Disused openings are boarded or brick-blocked and the main arched openings have been reduced in size. The western end of the building has been altered and modern openings, with both metal and wood frames, have been inserted below both timber and steel lintels. The programme of recording has ensured that a record has been made of the building prior to demolition.

In March 2005, an archaeological watching brief was made during the construction of a replacement footbridge to span the Nant y Pandu stream at Glyndyfrdwy, Denbighshire (SJ 147415). The bridge has replaced the former damaged slate bedded footbridge on the route of the tramway which once conveyed slate slabs from Deeside and Moel Efnna Quarries downhill to Nant y Pandu slate mill. The abandoned tramway is now in use as a public footpath which descends the deeply incised Nant y Pandu valley in a south-north direction.

The tramway forms part of Scheduled Monuments DE 246, which comprises the slate quarry, tramway and slate mill. The proposed works were granted scheduled monument consent by Cadw: Welsh Historic Monuments, with the proviso that an archaeological presence be maintained on site to record any features revealed by the proposed works.

During excavation of a level platform base for the construction of the new bridge on the northern bank of the river, the original cutting for the tramline bridge was observed. Slippage on the bank had obscured this original cutting, giving the bank a more natural sloping profile. Excavation for the new bridge revealed a distinct near-vertical cut in the exposed section. No other archaeological evidence was revealed.

Pat Frost

Northern England

The Newcastle to Carlisle railway opened for its full length in June 1838, when it was the longest railway in Britain a distance of 60 miles from its terminus at Gateshead to Carlisle. It was also the first railway to cross England from east to west. The railway had a junction with the Earl of Carlisle’s railway at Milton (Brampton Junction) which allowed coal and lime from the Earl’s works on the north Pennines to be distributed more easily. The nearest station to Alston was Haltwhistle, 12 miles away but the London Lead Company still claimed that carrying ore by road to either Haltwhistle or Hexham and then by rail to their smelters they could save up to £800 per year in transport costs.

It was not long after the proposal to build a railway up the South Tyne valley to Alston was proposed. The line from Haltwhistle to Alston was opened in November 1852. The line uses 10 viaducts including the impressive Lambley Viaduct which was restored by the North Pennine Heritage Trust back in mid-1990s. This year has seen the Trust take on the equally impressive viaduct at Haltwhistle, known to the locals as the ‘Alston arches’. This six-arched viaduct carried the railway as it left Haltwhistle Station over the South Tyne. Unfortunately, the Haltwhistle bypass on the A69 has now cut the large embankment after the viaduct. Once restoration of the viaduct is completed, it is proposed to open a circular walk over the viaduct from the station and returning via the riverside paths.

If we return to the Earl of Carlisle’s railway, the trackbed of the Lambley to Hallbankgate section of this route is being converted into a cycleway by Sustrans. The route was built in stages between 1828 and 1852 as the Earl slowly expanded his coal mining operations to the east. It eventually connected to the Alston branch line just west of Lambley viaduct.

It was over part of this line that Stephenson’s ‘Rocket’ ran after Earl of Carlisle bought it in 1837. The route passes the sites of the various collieries in the area including the pumping house mentioned in the report last year at Hartleburn. The other major site passed by the railway is the Tindale splitters works. Opened in 1845 by James Henry Attwood, it closed in 1895. The site was reworked in the 1930s to reprocess the various slags on the site.

Moving into County Durham, it is with regret that I have to report the illegal demolition and removal of the smaller headframe from Groverake (laterly Frazer’s Grove) mine at Rockhope. This was the last commercial fluor spar mine in the North Pennines and closed a few years ago. The mine had two shafts each with its own headframes which were a distinctive landmark in the area and a visible reminder of the fluor spar industry.

The scrap dealers who cut down and removed the smaller headframe have been arrested, but the damage is done and the headframe is lost. The owner of the site would like to see the last headframe remain. But, due to the remote location of the site and its easy access from the road, a debate is ongoing as to how to protect it.

Finishing this report is the sad news that Corus have announced the closure of its rail plant at Workington. This will bring to the end an industry based in west Cumbria since 1872 when the West Cumberland Haematite Iron and Steel Company first started to roll rails in the area. The closure will also bring to an end the major iron and steel industry in the area.

Graham Brooks
Local Society and other periodicals received
Abstracts will appear in Industrial Archaeology Review.

Cumbria Industrial History Society Bulletin, No.62, August 2005
Dorset Industrial Archaeology Society Bulletin, No.13, September 2005
GLIAS Newsletter, 219 & 220, August & October 2005
Hampshire Mills Group Newsletter, No.70, Autumn 2005
Industrial Heritage, Vol. 31, No. 2, Summer 2005
Lancashire History Quarterly, Vol. 9, No.2, Summer 2005
Museum of Bath at Work Newsletter, Summer 2005
Scottish Industrial Heritage Society Review, No.42, Spring 2005
Search: South Wiltshire Industrial Archaeology Society Bulletin, No.82, September 2005
Surrey Industrial History Group Newsletter, 146, July 2005
TICCIH Bulletin, 29, Spring 2005
Yorkshire History Quarterly, Vol. 11, No.1, August 2005

Books Received
The following books have been notified for review in Industrial Archaeology Review.


South Wales has been largely overlooked as an area of interest relating to the works and activities of the famous Victorian engineer Isambard Kingdom Brunel, yet it was important in terms of engineering landmarks at virtually every stage of his career. The first of three volumes, this book examines the achievements and legacy of Brunel in South Wales, where many of his engineering landmarks survive. It first sets the scene with the historic background of the Merthyr ironworks and Richard Trevithick.


This is the first academic work covering the life and business activities of Charles Roe, one of England’s least recognised eighteenth-century industrialists. Born at Castleton in the Peak District, he moved to Macclesfield where he established a silk mill. He later made a fortune in copper mining and smelting, discovering the vast copper deposit at Parys Mountain on Anglesey and mining copper ore in Alderley Edge, Wales, Yorkshire, the Lake District and even the Shetlands. The book sheds much light on the way of life in Georgian times. It has many illustrations and an impressive index.


Flooded by inrushing waters, Moston Colliery was re-sunk to a high standard in 1884. The mine closed in 1950 and is now a fading memory, the site having become a housing estate. This book traces the history of the colliery and describes mining methods and problems encountered.


The second volume in an important new biography of the famous inventor and industrialist, covering his move from Glasgow to Birmingham, early engine trials, and improvements to the single-acting pumping engine, turning it to a standard production design. Prospects and problems in the Cornish copper mines are also covered, while there is an important section on Watt’s career as a natural philosopher.


This book considers the sometime turbulent history of Northumberland’s coastal ports, from simple fishing harbours to the great industrial harbours built on coal export, and reflects on their industrial archaeology. Harbours also served quarrying and lime-burning. Great engineers were responsible for harbour developments, such as John Smeaton or John Rennie, but some lesser and unknown men were also involved. The story of the ports and harbours is set within the context of the growing industrialisation of the county.


A large collection of photographs showing many aspects of windmills, their design and operation. Aspects include post, smock and tower mills, the development of sails, corn milling water pumping, land drainage, saw mills, paper mills, mustards mills, oil mills and many more applications. Examples are taken from throughout Britain, the Netherlands and elsewhere.

Short Notices


Illustrated throughout in colour, this new Shire book looks at the wonderful variety of canal structures in England, Wales and Scotland. There are sections on bridges, aqueducts, locks, tunnels and waterside buildings such as lock-keepers’ cottages, workshops or pubs. The canals are brought up to date in the twenty-first century with newly constructed aqueducts, locks, bridges, and the highly-acclaimed Falkirk Wheel. Many of the canals have been restored or maintained for pleasure boating, as is evident in the pictures. There is a short list of places to visit.


This book in the Images of England series has illustrations with explanatory titles. Small local breweries were often more widespread than is now realised and many towns and counties not considered as brewing ones had a surprising number. Gloucestershire is no exception. This book covers both well-known examples and the small village ones, illustrating people, processes and buildings. The latter include some good ‘demolition’ photographs which, from the industrial archaeologist’s point of view, are ideal as they show constructional details.

A Guide to the Industrial Archaeology of Derbyshire, ed. By Dudley Fowkes, Mark Sissons and Ian Mitchell. AIA, 2005. 60 pp, 59 illus and 10 maps. ISBN 0 9528930 8 8. £5.50, available plus 65p P+P from Roger Ford, AIA Sales Officer, Barn Cottage, Bridge Street, Bridgnorth, Shropshire WV15 6AF.

The AIA’s latest conference gazetteer has been compiled by the editors and other members of the IA section of the Derbyshire Archaeological Society. They have managed to pack over 350 sites into the pages, with a great variety of...
industrial types concerned, for example, with milling, textiles, mining and quarrying, canal, rail and road transport, engineering and public utilities. This attractive little book is a must for anyone wishing to explore the county of Derbyshire.


Profusely illustrated with diagrams and illustrations, this book traces the evolution of iron making from ancient times through to Europe in the middle ages, the evolution of the charcoal blast furnace and the eventual change to mineral fuel. The chapter on the evolution of coke blast furnaces between 1870 and 1950 is of particular interest, as is the development of the science of iron making, iron products and improvements in iron making from the Second World War to the new millennium. There is an extensive bibliography and a fascinating summary of iron making through the ages. The only drawback is that it is heavily biased towards the USA, but overall it is a volume of great interest to anyone involved in the history of iron making.

**The Way to the Stars – the Story of the Snowdon Mountain Railway**, by Keith Turner. Llanrwst: Gwasg Carreg Gwalch, 2005. 96 pp, many illus. ISBN 0 86381 954 0. £6.50. Obtainable from: Gwasg Carreg Gwalch, 12 tard yr Orsaf, Llanrwst, Wales LL26 0EH, or 01492 642031; fax 01492 641502; books@carreg-gwalch.co.uk; www.carreg-gwalch.co.uk.

Climbing more than 3,100 ft (1000 m) in under five miles, the Snowdon Mountain Railway is one of the technological wonders of the late Victorian age. Now over 100 years old it continues to transport many tens of thousands of passengers every summer on a spectacular journey from the lakeside village of Llanberis to the summit of the highest mountain in Wales. The railway historian Keith Turner tells the story of this unique rack railway still reliant on steam locomotives and carriages that first saw service more than a century ago. Many colour illustrations, with numerous historic photographs.

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21-23 MARCH 2006
INTERNATIONAL CONVENTION – VALORIZATION OF INDUSTRIAL HERITAGE
Sites, museums and case studies, with post-convention tours 24-26 March. For details and registration form, contact TICCIH-Chile, Chilean National Committee for the Conservation of Industrial heritage, Av. Apoquindo Nr. 6275, Las Condes, Santiago, Chile. Tel/Fax: (0562) 201 7193, E-mail: ticcichile@gmail.com

8 APRIL 2006
SOUTH WEST & SOUTH WALES REGION IA CONFERENCE SWWRIAC
at Risca, organised by Oxford House IA Society. Advance notice only.

5-7 APRIL 2006
WILTSHIRE IN THE AGE OF STEAM
at Lacock Manor, a residential course with lectures and field visits examining the Kennet & Avon Canal corridor, including iron working, railways, roads, mills, brewing and textile industries. Details from: Lacock Manor College, Devizes, Wiltshire SN10 4RG, Tel: 01380 840495, Fax: 01380 840005.

8-9 APRIL 2006
AIA IRONBRIDGE WEEKEND: BREWING
at the Ironbridge Institute, Coalbrookdale, on the theme of brewing. Advance notice only. Full details will be sent with the next mailing.

22 APRIL 2006
SOUTH EAST REGION IA CONFERENCE
at The Medical Centre, St Richard’s Hospital, Chichester, organised by Sussex IA Society. Advance notice only.

24-29 APRIL 2006
ALSACE AWAITS
the AIA spring tour, based on Strasbourg, including a visit to Mulhouse. For further details please contact Paul Saulter, 80 Udimore Road, Rye, Sussex, TN31 7DY.

10-11 JUNE 2006
NAMHO CONFERENCE 2006: MINES IN THE LANDSCAPE
at the Royal International Pavilion, Llangollen, the National Association of Mining History Organisations annual conference in Llangollen, with lectures on the subject of Mines in the Landscape and field trips for those interested. For details see the website: http://namhconcference.org.uk/.

2-5 JULY 2006
PAST INDUSTRIES IN THE COUNTY BORDERS
at Dillington House, Ilminster, Somerset, a course on IA in the attractive coastal and inland landscapes of the Somerset, Devon and Dorset borderlands, with lectures and field visits to include lace mills, branch railways, early bridges, quarries, breweries, corn mills, lime kilns, and harbours. Details from Dillington House, Ilminster, Somerset TA19 9DT, Tel: 01460 52426, website: www.dillington.co.uk.

3-9 JULY 2006
BRUNEL BICENTENARY WEEK
at London and Bristol, including a mid-week steam trip. Events include the Institution of Civil Engineers Triennial Conference, London, Brunel Bicentenary Steam Train Trip, Brunel Bicentenary Conference, Bristol, Brunel Tours of Bristol and Newcomen Society Events, Bristol. For more details visit the website: www.ice.org.uk/conferences.

8-14 SEPTEMBER 2006
AIA ISLE OF MAN CONFERENCE
a return to the Isle of Man. Advance notice only, but see page 11 of this issue for more details.

14-23 SEPTEMBER 2006
TICCIH XIII CONGRESS
at Terni, Italy, the scientific part of the 13th congress of The International Committee for the Conservation of Industrial Heritage will be held 14-18 September, with visits to surrounding industrial heritage sites, followed by post-congress tours. There is a wide-ranging programme of academic activities, scientific visits and events that will allow participants to establish contacts, exchange information, and compare different experiences at both national and international levels. Contact: Congress Secretary’s Office, TICCIH 2006, ICSIM – Via I Maggio 23, 05100 Terni, Italy. Tel: 0039744407187, Fax: 0039744407468, E-mail: icsim@icsim.it

Industrial archaeologists keep out! Stromness whaling station in South Georgia is in a poor condition and is out of bounds to all visitors (see page 8)