

# INDUSTRIAL ARCHAEOLOGY NEWS

**130**  
AUTUMN  
2004

THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

FREE TO MEMBERS OF AIA



**AIA goes to Catalonia • Kew Steam Museum • Crossness • Blaenavon restoration  
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# INDUSTRIAL ARCHAEOLOGY NEWS 130 Autumn 2004

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## AIA Catalonia Tour

*The AIA's tour of Catalonia took place from Monday 19 April to Saturday 24 April 2004. I am sure all those who attended would like to thank James Douet for his excellent notes, seamless translations and great good humour; Eusebi Casanelles i Rahola for all his help, and making so many of his staff available to show us round; Francesc Tarrats, Director General of Cultural Heritage for Catalunya, for taking the time to come and speak to us, and to Paul Saulter for making the arrangements. Few of us probably realise that Paul gives much of his time free to societies like the Newcomen and the AIA. The welcome help of James Douet and Peter Neaverson are acknowledged in compiling this account.*

Judith Hodgkinson

Catalunya, as we were to discover during the week, is very different from the rest of Spain, not least in its 200 years of industrialisation, notably in textiles. Having made our own way to Barcelona, 45 members gathered for the evening meal on Monday so we could meet our guide, James Douet, and Joan Munt, president of the Catalan association for industrial archaeology. We also received excellent and extensive packs of information including one or two in a wide series of A4 format booklets intended as teaching aids. Although in Catalan they are well produced and packed with excellent diagrams.

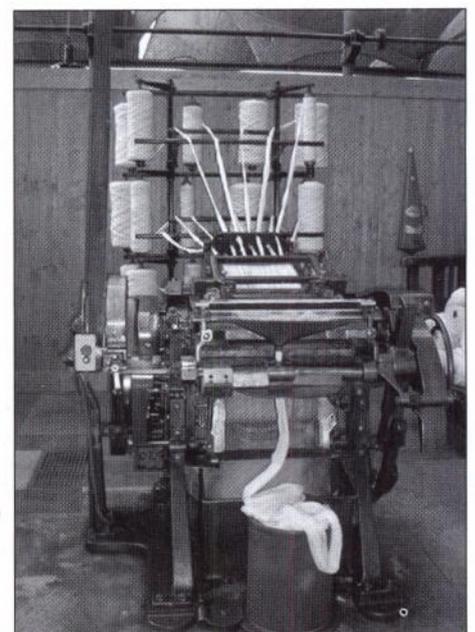
On Tuesday we travelled north east beyond Girona to the town of Banyoles to visit the dilapidated forge at El Comú. As we were to see time and again during the week, the landfall and water supply are such in Catalunya that a surprising number of take-offs is possible. In this case the water supply leat was from a lake and we gathered from our local guide Luis Privát there had been 15 take-offs in one kilometre. At El Comú there were three wheels, driving the trompe blowing system for two hearths and two trip hammers, working first iron and later copper. In rather less than ideal conditions the family operating the forge lived on the floor above. Part of the building had been used for paper-making in the nineteenth century, with a drying space at second floor level. Currently awaiting funding for restoration, most of the remaining structure and machinery is covered in a generous layer of pigeon droppings. A brief coffee-and-comfort break was rather taken advantage of and somewhat scuppered the timetable for the rest of the day. Did we think this was a holiday?

Our second visit was to the Gerunda eau-de-vie distillery at Girona in a fine Modernista building of 1911 by Domenech i Montaner. Distilling is now carried on in the firm's other premises in Galicia in NW Spain, but the fruit flavours are still produced here. The attention of the steam-buffs focused on the remarkably small vertical-boiler steam engine by Alexander Hermanos (Brothers) of Barcelona, (but of Scottish origin). We were shown round by Maria

del Mar Vich and her father and saw the bottling and packing plant. Then on to Anglès for a 1½ hour three-course lunch in a local restaurant, with the region's Penedes wine freely available which established the pattern for the week.

Then followed a walk to the Vapor Burés cotton mill, where we were met and taken round by Emile Rams. Established in 1872 exploiting the hydraulic potential of the river Ter on the fringe of the old town, it became necessary for the owners to provide facilities to attract labour. Initially a canteen was provided, and from 1889 accommodation, shops and a school, thus creating a colònia or colony, the first of several of these interesting developments which we would see during the week. In 1958 nearly 1,200 people were employed spinning and weaving cotton. Only very recently closed and cleared of its textile machinery, the main attraction at the mill now is the cross-compound horizontal steam engine built by La Maquinista Terrestre y Marítima de Barcelona which was added to supplement water power following further expansion of the mill. This has been bought by the local council at the disposal auction to ensure its preservation. We continued past the blocks of flats associated with the mill and the fine 'Torre' or owner's mansion before returning to the coach.

Our lengthy lunch meant that we had to forego the photo-stop at two hydroelectric stations (opened 1905 and 1916) as we were at least 2 hours behind schedule. Unfortunately and unforgivably this meant that we missed meeting the Mayor of Montcada for the official launch of the newly-restored steam-powered pumping station built in 1879 on the outskirts of Barcelona. The industrial settlement of Montcada has been important in the supply of water to Barcelona since Roman times, and the delightful buildings have been restored to form a slightly



Textile machinery at the Museu de la Ciència i de la Tècnica  
Photo: Judith Hodgkinson

## COVER PICTURE

*The bunting is out to celebrate the steaming of one of the great beam engines at Crossness on 4 April 2004 (see page 8)*

Photo: R J M Carr



The AIA group photograph at the Catalan National Railway Museum, Vilanova i Geltrú

Photo: Judith Hodgkinson

isolated cultural centre on the riverside. A pair of vertical steam engines, again by Alexanders, is preserved with overhead crankshafts operating plunger pumps. The day ended with a visit to the Museu d'Història de Catalunya, the extensive displays mainly labelled in Catalan, were enlivened with many working models. The evening concluded with a cava and tapas reception on the top floor of the stunningly located museum, overlooking the city with the harbour in the foreground. The Direcció General del Patrimoni Cultural of the Generalitat de Catalunya, Francesc Tarrats Bou, gave a short address on the successes of, and aspirations for, the development of industrial sites as museums in the region. Marilyn Palmer responded on behalf of the AIA.

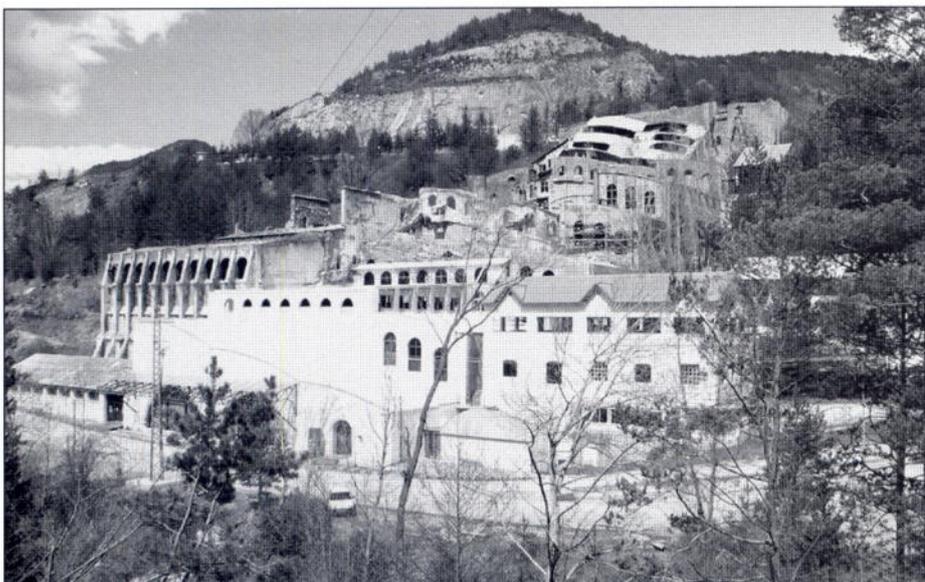
Wednesday began with a visit to the major maintenance workshops of the Ferrocarrils de la Generalitat de Catalunya (FGC) at Martorell, about 20 km NW of Barcelona and now part of the city's commuter network. The workshops

were smart, modern and extremely clean, and we were shown round by one of the engineers, Paco Torres. We walked alongside the inspection pit to see the cog mechanism of one of the five new Swiss Staedler funicular units for the steep haul up to Monserrat monastery. A machine for re-profiling wheels was demonstrated for us: according to Señor Torres the aim is to check all wheels once a month. This doubles the life of the wheel, and presumably improves wear and tear on track – and passengers. In the diesel shed a loco from the phosphate mines was in for servicing, and a third shed repaired and serviced carriages and wagons. There was a small amount of old rolling stock as well, including an unusual Garratt 2-6-0 + 0-6-2 articulated locomotive of 1926. A 40-minute up-hill ride in vintage coaches behind a 1948 Energies Marginell (Belgium) 2-6-2 tank locomotive deposited us at Monistrol, from where we continued by coach. From the station you could see the funicular railway train like a green caterpillar making its way up the

extraordinary rock formation of Monserrat to the monastery.

The next visit was to the Colònia Sedó at Esparreguera. A cotton mill was set up here in 1846 on the site of a flour mill and an excellent model showed the final extent of the site. By 1878 more power was required and a further take-off 5 km upstream was linked to the mill by a handsome aqueduct. A walk through the cutaway giant 1899 Francis turbine by Planas Flaquer i Cia. of Girona which delivered 1400hp, gave access to an AV display in the turbine pipe and water supply and discharge tunnels. At its peak the mill employed 3,000 and its chief product was cotton velvet, sometimes described as corduroy (though neither the machine seen here nor the one seen later at the museum at Terrassa was set up to produce the striped pile of corduroy). Other features included the variety of narrow-gauge railways in the factory and the spiral-twist brick chimney of the bleaching works. There was some discussion as to whether this was an experiment in improving the draught. Finally on our way to lunch at the Fonda in the works village, we were let through locked gates separating the living quarters from the mill proper. Although only 80m<sup>2</sup> in floor area, some apartments were still occupied. We could easily have spent a whole day at this one site.

Although parts of the Sedó site are occupied by new businesses, it is still possible to visit, whereas at our next port of call, the Colònia Güell, we concentrated on the high quality of housing for the workers as the mill itself is not accessible. The colony was established some 10 km from Barcelona to escape violent labour confrontations. Begun in 1890, Eusebi Güell entrusted the master-plan to the wildly innovative architect Antoni Gaudí (1852-1926). Gaudí was already deeply involved in the still-unfinished enormous Church of the Sagrada Família in Barcelona, and one of the few buildings at the Colònia he designed was the church. Although only the crypt was completed, Gaudí used it to experiment with ideas for the Sagrada



Clot del Moro cement works

Photo: Judith Hodgkinson

Família, especially the catenary arch (which can be seen to breathtaking effect in his Casa Milà mansion in Barcelona).

Our final visit of the day was to the Sant Joan Despi factory. Originally a mill producing pigment for calico printing, it benefited from the building of the Canal de la Infanta constructed in from the Llobregat river to the NW of Barcelona. The mill was adapted in 1910 for cardboard manufacture and contains almost all its machinery. Our guide, Anna Cabello Aguilar, explained the processes whereby waste paper is soaked, pulped, allowed to settle, drained and transferred onto a felt belt where it is rolled. Sheets were then interleaved with hessian, flattened in a very large press, and cut to size for use in book covers and shoe soles. A range of open-sided wooden drying sheds remains outside. Parts of the building are used for the re-cycling of furniture as part of a social rehabilitation scheme.

On Thursday in heavy rain (our only wet day) we visited the Vapor Buxeda at Sabadell, just north of Barcelona. The many textile mills in this town utilised steam and eventually electricity as a source of power. At this mill, only the entrance building and engine house remain of what had been one of the largest wool spinning and weaving mills, built in 1853 and now maintained by the municipality. A three-screen presentation (with commentary ably translated by James alongside the sound track) explained how the industry of the town developed in the 1840-60 period. At the Vapor Buxeda an 1889 40hp steam engine housed in the basement was replaced in 1906/8 by a 300hp horizontal compound engine mounted on a water tube boiler made by Buckau Wolf SA of Magdeburg, Germany. This engine, still in pristine condition, was placed in a new ground floor engine house and its design is reminiscent of the packaged power plants of that period made by Garretts of Leiston in Suffolk. The earlier underground boiler house, coal stores and chimney base were all accessible.

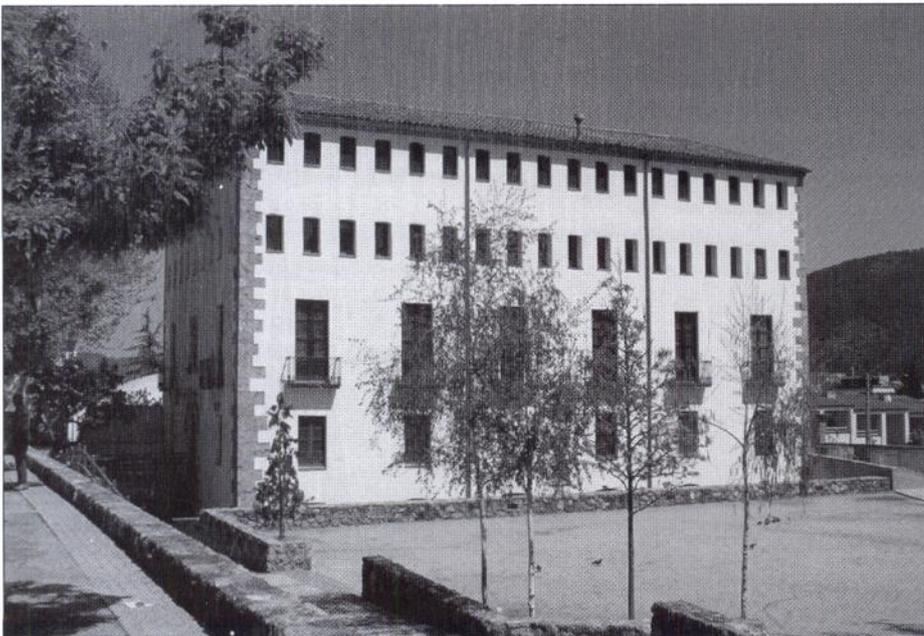
On to Terrassa, a medieval town which expanded rapidly on the back of the woollen industry in the early nineteenth century and suffered greatly when the industry collapsed in the 1970s. Some 20 km from Barcelona, it is home to the Museu de la Ciència i de la Tècnica de Catalunya housed in the Vapor Aymerich, Amat i Jover, a stunning modernist building of 1907-9 by the municipal architect Lluís Muncunill. The centuries-old roofing system known as the Catalan vault uses thin bricks or tiles and quick-setting mortar to create shallow curves that can achieve spans of up to 4m or more. Requiring the minimum of iron support and used here in conjunction with a north-light system, it seems like billowing canvas, lightly pinned down, and bright even on a grey day. Closed down in 1976, the mill re-opened as a Museum in 1984, and now houses excellent displays on the history of energy, textiles and transport. The Director, Eusebi Casanelles, gave a guided tour of the textile section. James Douet then led a short walk around the town centre pointing out some of the grand buildings directly related to the textile industry such as each firm's elegant showrooms, and those built as a result of local wealth and enterprise such as the magnificent market or the grand, but poorly-sited, theatre.

Following an excellent lunch in the Museum at which we were joined by the Director and his deputy, Jaume Matamala, we returned to Barcelona passing several former textile mills in the city before pausing at Montjuïc to look at the exterior of the Casaramona cotton spinning factory. Again in the modernist style, 1911/12 by Josep Puig i Cadafalch, the exterior seemed more about architectural effect than good factory layout, but we did not see the interior with its two single storey sheds roofed with Catalan vaults. The mill only worked for about 10 years and has since been used as a police station before its recent purchase by a bank and conversion to a cultural centre. An opportunity was then given to

finish early or to remain with the coach to visit the El Born market and the Estació de França near to our hotels. The El Born was the first and finest of the iron-framed markets raised around the *Eixample* the planned extension to the old city when its eighteenth-century walls were demolished from the 1860s. Closed for 20 years, the interior has recently been excavated bringing to light fantastically detailed evidence of the city that was demolished in 1713 at the end of the War of Spanish Succession. The Estació de França station was built in 1870 on a curved layout due to site constraints, with twin arched trainsheds 26.5m high. Rebuilt for the 1929 Universal Exhibition and restored in preparation for the 1992 Olympics, it faces a challenging future as trains will soon leave for the last time. The vast shed's most likely future is as an air and space museum, raising the interesting prospect of aeroplanes, like metal cuckoos, taking over the steam trains' old nest.

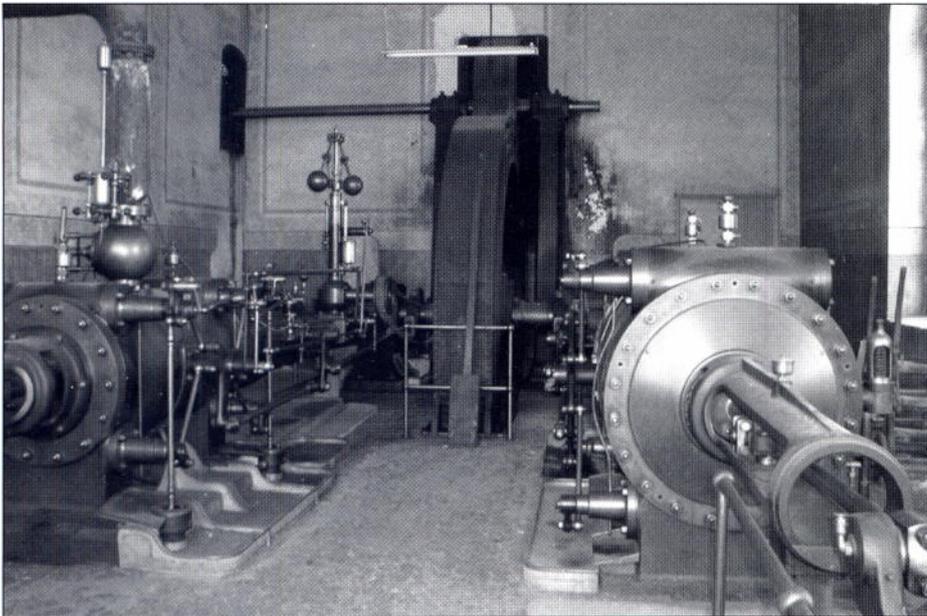
On Friday we set off north almost to the French border to visit the very remote semi-ruinous Clot del Moro cement works. Now owned by the Generalitat de Catalunya it is the subject of a rescue plan, perhaps surprisingly, given its location. It was founded in 1901 by the wealthy Barcelona industrialist Eusebi Güell using American plant made by Allis Chalmers. Water piped from the headwaters of the Llobregat river powered a series of 13 Pelton wheels to drive the machinery and coal was available from nearby Cercs. Supplies were brought to the works by narrow gauge railway which has now been restored to bring visitors to this remote site which also houses a transport museum. There was some living accommodation on site but most of the workforce lived in the nearby town of La Pobla de Lillet. James Douet guided tours to one upper level of this extensive steep site where the inclined wide-span Catalan-vaulted roofs were used to maximum advantage. An excellent interpretation centre has been established with displays on the history and manufacture of Portland cement and of the Asland Company which operated the works until they closed in the 1960s. This is a brave and unique initiative in industrial preservation.

A spectacular drive back down the valley and then up another winding road took us to the lignite mining area of Cercs. Here a lunch which would have fed a small army was served in the Sant Corneli mining village restaurant La Fonda with seemingly endless supplies of alcohol in celebration of St George's Day. Sant Jordi is the patron saint of Catalunya and is commemorated by the exchange of red roses and books between men and women! A slight lack of concentration was noticeable when the group boarded a small train for an underground visit to the Mina Sant Romà where set-piece displays on successive mining techniques were seen as we walked back out along the level. Outside were static exhibits of mining tools, machinery and forms of transport. A visitor centre outlined the development of the industry from the 1850s which expanded considerably with the opening of the railway up the Llobregat valley. Life in the



The El Moli paper mill at Capellades

Photo: Judith Hodginson



1887 Horizontal steam engines at the Vapor Burés cotton mill

Photo: Judith Hodgkinson

mining village and labour problems were not neglected and a typical furnished miner's house was displayed. The local landscape is littered with remains of aerial ropeways which brought coal down from remote workings to the railhead, corrugated iron sheds and the prominent thermal generating station which was built in 1929. This bought the mining company in 1965 but now uses imported coal! We then returned to Barcelona via the Baells reservoir on the Llobregat which was constructed 1970/6 and impounded by a 302m sweeping curved dam, 112m high across the valley and now a source of hydroelectricity. The site of one textile colònia, established in the 1920s, was submerged beneath the reservoir.

Our final day began westwards to Igualada, in the Riu Anoia valley, to visit the thirteenth-century Cal Granotes tannery and a leather

museum established in a former cotton mill. The local water supply has a high calcium content and there has been tanning in Igualada since at least the twelfth century, using hides imported from South America from the seventeenth century. Families worked in 'clans' with secret methods and recipes involving excrement, usually pigeon droppings. It took approximately 14 months to complete 100 hides and conditions were made worse by having to exclude the light to avoid a chemical reaction in the steeping liquids. The display area was rather too clean to convey anything of the unpleasantness of working there, but the educational booklet shows very succinctly that what took 12 months in the artisan process now takes about 4 days. The leather museum is housed in the former late nineteenth century Cal Boyer cotton mill and contains exhibits of leather products from many parts of the world whilst the

modern machinery and methods are accompanied by video clips. There was insufficient time to do justice to the fine displays on methods of lifting water and the uses of water power in another section. Yet more floor space is to be utilised for a display of textile machines. Steam buffs were not disappointed, a horizontal steam engine made in 1862 by Manning Wardle & Co of Leeds has been installed in the original mill engine house.

Our next visit was to the El Molí paper mill at Capellades, one of over 100 documented in the early 1770s and the highest of a chain of 16 water-powered paper mills in the town. Unfortunately the Director Victòria Raball was not available to take us round, but the lethal rag cutting machine was ably demonstrated by one of her assistants. Capellades made two qualities of paper for wrapping and writing, in a similar but more refined process to that which we had seen at the cardboard factory. The watermark and deckle edge were explained. Paper was dried on the upper floors and the distinctive ventilation window pattern with vertical louvres made paper mills easy to identify. Next, size was added, the paper was pressed and dried again, and then polished. In order to demonstrate this last process, James volunteered to open the sluice onto the waterwheel. Shouts of laughter were heard and several people emerged quite wet from that particular demonstration.

We then drove down the valley, making use of our new-found typology of the typical Catalan paper mill to recognise many more before reaching the Hostal Robert at La Pobla de Claramunt for lunch. Our next visit was to the Celler Miguel Torres vineyard and winery, one of the largest in the Penedes region. Wine was matured in underground vaults, some dating from 1551, in all some 26 km of them, complete with a railway system. Among notable sights were bottles from years of interest to the family – anniversaries, world cup etc – but which they didn't drink, and one million bottles of one vintage.

Our final visit was to the Catalan National Railway Museum, at Vilanova i Geltrú, where a large collection of metre different gauge locomotives and rolling stock is ranged around the turntable and within a roundhouse. The group photo shows extremely happy faces after a most rewarding few days – was it really only five?



All aboard for the underground visit to the Cercs coal mine

Photo: M Palmer

**ADVERTISE  
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# Water for London – Preserving London’s pumping heritage

*In 1999, the Department for Culture, Media and Sport (DCMS) listed the 1838 gate house at Kew Bridge Pumping Station, declaring the site to be ‘the oldest waterworks in the world containing its original steam pumping engines and is the most complete early pumping station in Britain... it is the most important historic site of the water industry in the country.’ This article outlines the history of the well-known Kew Bridge Pumping Station in its working days and as a successful museum. The author is the Museum Director.*

Lesley Bossine

Since 1974, the Kew Bridge Pumping Station site has been in the care of the Kew Bridge Engines Trust, a registered charity, which opened the site to the public as an independent museum in 1975. In common with many independent museums, it has a small team of five staff and a dedicated army of 79 volunteers who are involved in every area of the museum’s activity. In the 1970s people who took on sites such as Kew Bridge were often viewed as slightly mad steam enthusiasts rather than ‘proper’ museum people. Nearly 30 years on we may still deserve the epithet ‘mad’, but the DCMS citation, together with our status as a registered museum, serves to vindicate the vision of the museum’s founders. It is not unusual for foreign visitors to express amazement that a site as important as Kew Bridge continues to rely on the ingenuity of a voluntary organisation to ensure its survival.

The story of the Kew Bridge site begins in 1838, when the Grand Junction Water Works Company (GJWWC) opened its new Kew Bridge works on a former market garden site just north of Kew Bridge in Brentford. The Company, incorporated in 1811, was an offshoot of the

Grand Junction Canal Company, and one of eight private water companies established in London during the late eighteenth and early nineteenth centuries. Originally established at Paddington, the GJWWC moved into a new works in 1820, just downstream from the Royal Hospital at Chelsea. A pair of Boulton & Watt beam engines were used to pump water from the Thames to the Paddington reservoirs. Unfortunately this site was also downstream from the outlet into the Thames of the Westbourne Brook, later known as the Ranelagh Sewer, and in 1827, John Wright published a pamphlet entitled ‘The Dolphin or Grand Junction Nuisance, proving that 7,000 families in Westminster and its suburbs are supplied with Water in a state offensive to the sight, disgusting to the imagination and destructive to Health.’ The pamphlet provoked a scandal and, following a Royal Commission report, it was clear that the Company could not remain at Chelsea.

The first choice was on the riverside near Kew Bridge, but the objections of the Crown and then the Duke of Cumberland forced the change to the current site. By 30 March 1836 the purchase was complete and building began. The main pump house was designed by William Anderson in Georgian style and looks somewhat like an overgrown townhouse. When entering the original lobby, a barrel-vaulted ceiling, elegant, but simple, Yorkstone staircase and panelled doors emphasis this appearance. However, open the doors and you encounter an 1838 Maudslay beam engine (the last surviving non-rotative beam engine made by the firm), an 1856 Bull engine and one of the Chelsea 1820 Boulton & Watt engines. Although both the 1820 engines were moved to the site between 1839 and 1841, one was scrapped in 1946 to make space for items from other pumping stations, which formed the Metropolitan Water Board museum collection.

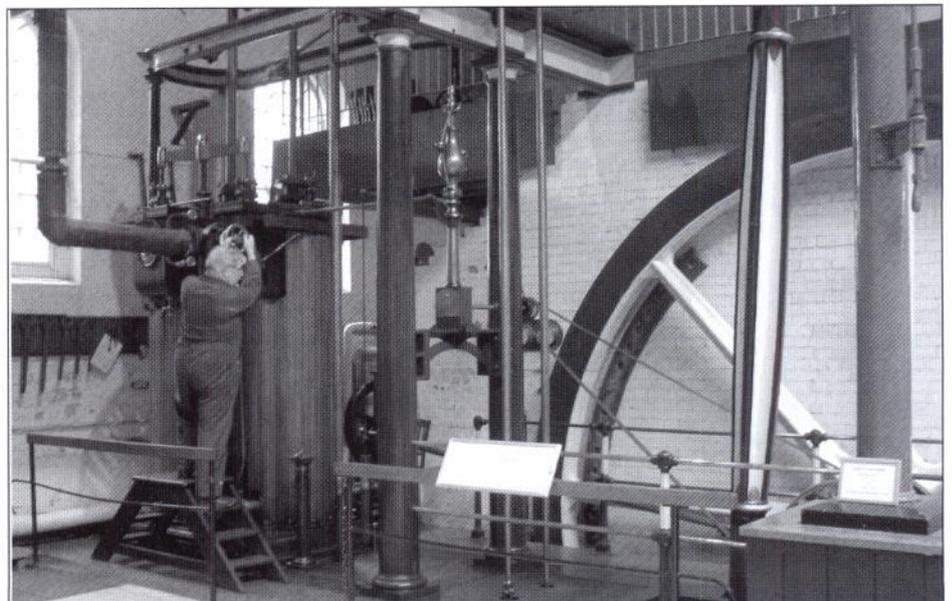
In addition to the pump house, the first phase of building on site included a boiler house and chimney, coal shed, gate house and workshop buildings, including a forge and machine shop. The workshops were enlarged in 1918 after being partially destroyed by bombs dropped from a German Giant bomber whose pilot was being chased by a British plane. Remarkably, having decided to ditch his bombs on what looked like an industrial site, he managed to miss all the pumping and boiler house buildings, including the prominent 196 feet (60 metres) high standpipe tower. The forge and machine shop still survive today with much of their machinery intact, including an 1868 Massey steam hammer and belt driven line shafting. The forge has been leased to artist blacksmiths, but the machine shop is still used by the museum trust for educational work and demonstrations.

In the early 1840s, the GJWWC appointed Thomas Wicksteed as their consultant engineer and his recommendations resulted in the commissioning of the most famous engine on the site, the Grand Junction 90-inch Cornish beam engine. This engine was built by Sandys, Carne & Vivian in 1846 at the Copperhouse Foundry in Hayle and was the first engine built in Cornwall specifically for waterworks duty. Wicksteed also had the Maudslay and Boulton and Watt engines converted to work under the Cornish cycle and built the first filter bed at the site. A pair of grasshopper type engines were installed as filter bed engines, but these were replaced by the Bull engine in 1856. By the late 1860s, there was a need to further increase the site’s pumping capacity and the Grand Junction 100-inch engine was installed, built by Harvey & Co, Hayle, and a second boiler house constructed to serve both the 90 and 100-inch engines. The 100-inch engine house was neatly built as an extension to the existing 90-inch building and today the unknowing observer would find it difficult to



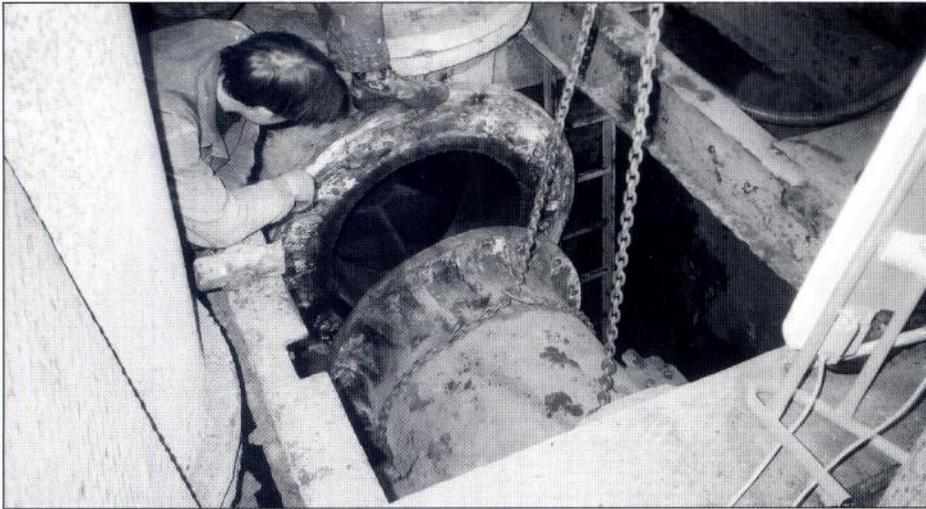
Driver attending the Grand Junction 90-inch Cornish beam engine, built by Sandys, Carne & Vivian in 1846

Photo: Kew Bridge Steam Museum



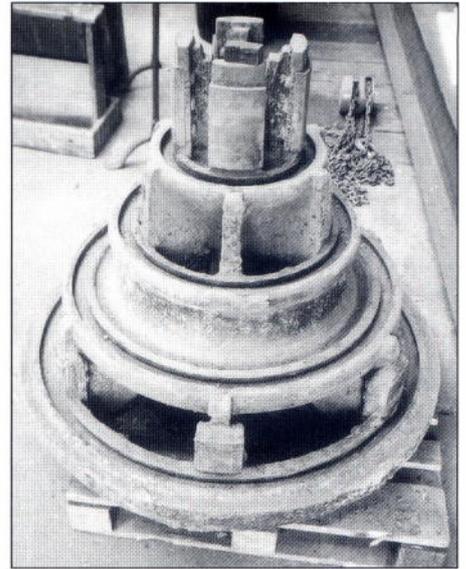
Easton & Amos engine of 1863

Photo: Kew Bridge Steam Museum



Easy does it: members of the Bull Restoration Team working on the main pump discharge pipework

Photo: Nick Morgan



The Bull engine's main pump suction valve, a complex casting which must have required the best pattern making and casting skills when made in 1857

Photo: Nick Morgan

imagine they were built 20 years apart.

In the 1890s the last steam pumping engine was added, a Worthington horizontal duplex engine, served by a Babcock & Wilcox boiler. These survived until the 1940s, when they were replaced with electric pumping sets, one of which remains. In 1934 a temporary corrugated asbestos board shed was erected to house four Allen diesel pumping engines and today that building is listed Grade II! These engines, together with the electric sets were used until 1986, when a new electric pumping station was built on the 1845 filter bed site.

When the steam engines were taken out of service in the mid-1940s, the then Chairman and Chief Engineer of the Metropolitan Water Board took the decision to preserve the engines and bring in items from other sites which were being redeveloped. In the early 1970s, the team of volunteers who had restored the Crofton beam engines visited Kew with a view to undertaking a similar, but more extensive project. Right from the outset, the new Kew Bridge Engines Trust wanted to restore the remaining engines to working order, under steam, and it is still our belief that the best way for people to understand the principles

and importance of such engines is by seeing them move. Even the non-technically minded visitor can be found staring at the 90-inch in awe whilst its 250 tons of metal moves in a stately fashion for half an hour each Saturday and Sunday. The simple beauty of the architecture of both engine and engine house has often been compared to that of a cathedral and the Trust has been careful to preserve the working ambience of the building.

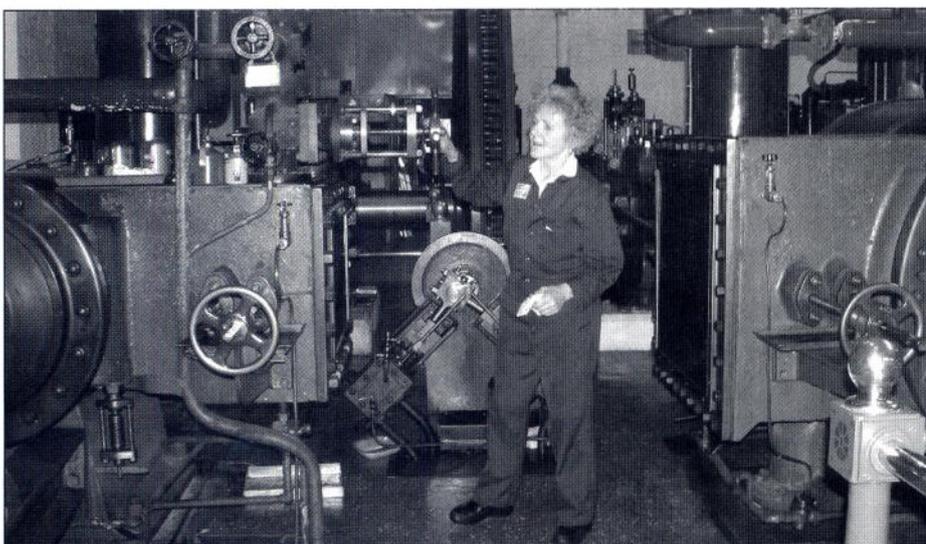
In addition to restoring the in-situ engines, the Trust set out to collect other types of steam pumping engines to show the technological development from beam engine to rotative power. Four engines were rescued and are now restored and operated every weekend, including a 1910 horizontal cross compound engine. This engine was built for the Croydon Corporation at Waddon and was the last steam reciprocating engine used in public water supply, finally being shut down in 1983. A gallery exploring the 2,000-year history of London's water was opened in 1997, supported by funding from the Heritage Lottery Fund and the European Union Konver programme. The museum aims to show all forms of water pumping technology and includes a waterwheel and horse gin in its collection and it

hopes to find a suitable wind pump.

All but two of the in-situ engines have now been restored and work on the Bull engine is well underway with a public steaming target of late Spring 2005. This engine is believed to be the last of its kind still in its original location, although the Science Museum has one in store at Wroughton. Restoring the engine has given the museum one of its toughest challenges with a great deal of the work taking place in damp and muddy conditions underneath the ground floor of the Maudslay house. When in service the engine drew water from the site's filter beds, but as these no longer exist a completely new water circuit has had to be devised to allow the engine to pump water from a sump.

At the end of 2003, the restoration team completed what we believe is a first in preservation, the re-boring of the engine's air pump cylinder in-situ. When the air pump was opened up it was found that the air pump rod and piston were so badly corroded that a completely new rod measuring 4 inches diameter by 10 foot length was made and the piston fitted with new bronze piston rings. This operation, together with the re-boring took several weeks but is now complete and the air pump assembly ready for re-installation. This operation represents a significant milestone for the project and the beginning of the re-assembly of the whole engine. The interpretation of the engine will draw on Bull's clash with James Watt and also make use of CCTV to improve access to what is a rather box-like arrangement compared to a traditional beam engine. It is also hoped that visitor access to the underfloor parts of the engine will be possible via a new staircase. Donations of labour, money and research about Edward Bull are welcome and should be sent to project coordinator Nick Morgan at the museum.

Kew Bridge Steam Museum is open daily 11am – 5pm, at Green Dragon Lane, Brentford, Middlesex, TW8 0EN, ☎ 020 8568 4757. Website: [www.kbsm.org](http://www.kbsm.org)



Daphne, one of the volunteer engine drivers, demonstrates her skills at Kew

Photo: Kew Bridge Steam Museum

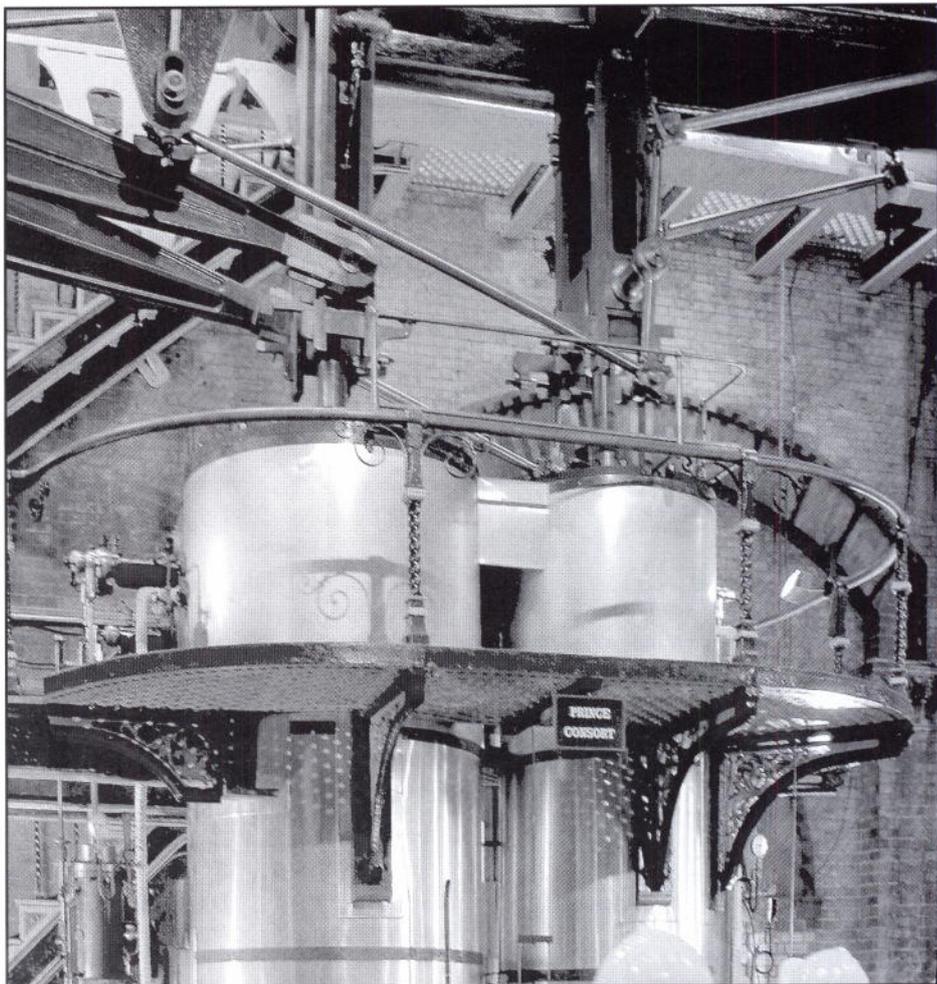
## STEAMING TIME AT CROSSNESS

One of the great beam engines at Crossness is now fully steampable, as reported in *IA News 129*, page 9. The photographs give an impression of the most enjoyable event which took place there on Sunday 4 April 2004.

*Right:* 'Prince Consort' in steam at Crossness on Sunday 4 April 2004.

*Below:* Eminent Victorians looking suitably impressed by the Crossness steam engines (but not so sure about the plastic cups).

*Photos: R. J. M. Carr*



**Are you missing out on an AIA Award?**

AIA Council has recently increased both the number of awards – and the prize money available! One of the AIA's six main aims is to encourage improved standards of recording, research, conservation and publication, and the annual presentation of awards at AIA Conference is our way of highlighting achievement by members and others, especially the students who are the future of IA in the UK. Our new suite of awards, with current deadlines, are:

**Fieldwork and recording awards**  
(1 March each year)

There are three awards in this category: our Main Award for the best piece of field work and recording; the Student Award for fieldwork and recording; and the Initiative Award for innovative projects – we are looking at the work of local societies here.

**Dorothea Award for Conservation**

(Form submitted by 30 September 2004 and Final Details required by 31 March 2005)  
Recently reintroduced, with thanks to Dorothea Restorations Ltd, this is for practical work, especially that done by local groups.

**Publications Awards**

(31 March each year)  
Aimed at local societies, there are no less than three awards – for your newsletters, your journal, and occasional publications.

**Essay Awards**

(31 March each year)  
Another 'new' award – two prizes are available, a general prize and a student award.

**And don't forget the AIA Conference Awards**  
(post-AIA Conference)

You do not have to enter these – we offer the **President's Award** for the best site visited and an **Initiative Award** for interpretation or ambition in taking on a challenge!

We know that excellent work is being done and exciting research and conservation projects are being planned. Why not enter – as an individual or as a society? The AIA can achieve its aim of acknowledging and publicising excellence, and you or your society can proudly celebrate your achievements and enhance your reputation for work in IA. There is something to aim at for everybody in IA – and don't forget the increased prize money! You know that you now should be thinking seriously about your entry.

*Mike Bone*

**What would you do with £500? Enter the AIA & Dorothea Conservation Awards competition and it could be yours !**

The first of the re-launched AIA & Dorothea Conservation Awards is being presented at the AIA Conference at Hatfield in August, when one local group will find itself £500 better off. The purpose of the Award is to support and encourage voluntary conservation work on sites and artefacts of industrial, agricultural, and domestic importance. It is made by and through the generosity of Dorothea Restorations Ltd, and judged by a panel of judges nominated by the AIA Council. The Award consists of a plaque and a cheque for £500, and entries which are commended by the judges will receive a Certificate of Commendation.

The deadline for the Award for 2005 has been extended from 31 July, so potential prize-winners now have until 30 September 2004 to submit an outline of their application. Entry for an Award is made by completing a Form of Application, together with brief description of the project, outline of proposed final entry, and illustrations, all of which can be on

CD, from which a short-list of applicants will be selected. Successful applicants will be notified by 31 October 2004, and they will then have until 31 March 2005 to complete the final application package supported where appropriate, by illustrative and supplementary material, which again may be on CD. It is anticipated that the short-listed project may involve a visit from one, or more, of the judges. The winner will be notified by 31 July 2005, in time to arrange for representation at the AIA Conference in autumn 2005.

Hurry, you still have time! Entry forms and full details of the rules are available from, and should be returned by 30 September 2004 to: David Lyne, Dorothea Award for Conservation, c/o 10 Somerville Road, Leicester, LE3 2ET.

**Editor's new e-mail address**

Please note the e-mail address for contacting the Editor of *IA News* has now changed to:

[aianewsletter@yahoo.co.uk](mailto:aianewsletter@yahoo.co.uk)

**CORRECTION**

We apologise to Ian West who spoke about Foxton at the AIA Ironbridge Weekend but was wrongly named on page 4 of *IA News* 129.

**AIA SALES**

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Roger Ford, AIA Sales Officer, Barn Cottage, Bridge Street, Bridgnorth, Shropshire WV15 6AF

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## Wolverhampton canalside under threat

A year has passed since demolition was announced of the former Albion Wharf buildings at Horseleyfields, Wolverhampton. Work is now nearing completion on the housing development that has been built on the vacant site. Gone are the two canal warehouses, one built for Henry Pratt, the other for Shiptons. Also gone are most of the Engineering Works established by J.A Shipton and the only survivor from this range of structures is Albion Flour Mill, which has been incorporated into to the development. Wolverhampton's canalside quarter was once lined with interesting building and gradually they have been taken down. A recent casualty was William Edwards' Griffin Works where edge tools were made. This building occupied the land formerly Union Wharf, which belonged to the Wolverhampton Boat Co. and later Crowley & Co.

A few buildings of note still remain, but for how long? They include the Wharfingers House in Union Mill Road, formerly on the wharf of Thomas Best, Canal Carrier. The Old Factory, which, a search of local records indicates, started as a woollen spinning mill and gun barrel boring factory, and was later associated with bell making and hinge making before later use in the cheese, butter and tallow lines.

Across the canal, and beside the station, is a range of buildings dominated by Norton's Flour Mill complete with canal loading wharf and the Mill Annexe buildings on the former Price's Wharf that probably retains elements of the former Bickley Danks & Co. Carriers Warehouse. The railway buildings include the LNWR Mill Street Warehouse and the infilled interchange basin.

At Lower Horseleyfields are located the Commercial Wharf buildings originally established by Crowley & Co., including stables and a boat dock. In Walsall Street various notable buildings include the Briton Motor Works, apparently the only structure in this area deemed worthy to have a blue plaque. Further along, the former canal-served Crosbie Paint Works building still remains, whilst in the adjoining Commercial Road, there are frontages of the Crown Nail

Works and the former Wolverhampton Power Station.

At Broad Street are the late nineteenth century wharves and warehouses built for the Shropshire Union Railway & Canal Co., and the filled-in Hay Basin. Beside the top lock are early canal cottages and the foundations of a Boatman's Mission. The adjoining Little's Lane Bridge has the appearance of being original and would date from the years 1771 or 1772. With regeneration firmly in the minds of the local authority, it will be only a matter of time before many more of these structures will be removed.

*Ray Shill*

## Blaenavon unveiled

Following a major four-year £800,000 programme of conservation and preservation at Blaenavon Ironworks, Alun Pugh AM, Minister for Culture, Welsh Language and Sport, formally unveiled the latest phase of works at the World Heritage site on a rainy 1 July.

Substantial parts of the monument are now open to visitors for the first time and they will now be able to explore, unaccompanied, the main furnace yard, the cast house and closely examine one of the furnaces. Guided tours will also be provided to the upper areas of the site, offering far-reaching views from the top of the water balance

tower across the whole Ironworks and the surrounding World Heritage landscape.

The two major programmes of work undertaken involved the conservation of the water balance tower and major engineering and consolidation work to the retaining walls behind the main bank of furnaces. The works to the retaining wall were particularly challenging as the wall was on the point of collapse. It was also found that the area behind it was riddled with tunnels, shafts and vents associated with carrying hot air away from and back to the furnaces as part of the blowing process. Tying the crumbling wall back through these structures to the rock behind required considerable skill.

The opportunity has also been taken to relocate the memorial to Sidney Gilchrist Thomas who, with his cousin Percy Carlyle Gilchrist, made the technical breakthrough at Blaenavon of finding a way to produce steel from phosphoric iron ore.

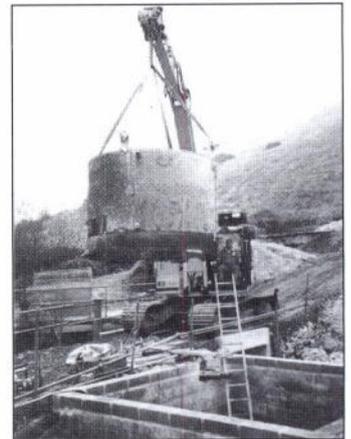
Alun Pugh, who will be remembered by many members from the South-East Wales Conference, said: 'Wales has an industrial heritage to be proud of, and Blaenavon Ironworks is an excellent example of the fresh approach we are taking to preserve this important legacy. The recent conservation work here will open up

even more of this fascinating site to visitors and help bring the past to life for many more years to come.'

*Michael Messenger*

## Famous funnel rises again

The most famous, if not the least seen funnel in maritime history has hit the news again. Following the explosion on the *SS Great Eastern's* maiden voyage on 9 September 1859, the great ship put into Weymouth Bay and an undamaged portion of the No.1 funnel was acquired by the Weymouth Waterworks Co. to be used as a strainer at its Sutton Poyntz water source.



*The last surviving piece of ironwork from the SS Great Britain is lifted from the reservoir chamber at Sutton Poyntz where it served as a strainer for 143 years*

*Photo: John Willows*

The funnel portion was installed in the spring of 1860 and was in constant use until its removal on 11 November 2003. Some dimensions include: diameter 86 inches; length of section (vertical height) 63 inches; thickness of plate ½ inch; strainer hole size ¾ inch diameter. Construction: two semi-circular plates, butt jointed together with single cover-plate, riveted and random bolted on one side where plates were dismantled for transporting to the site. To act as a strainer, holes were drilled around the circumference: three rows at middle level and ten rows at the bottom.

In September 2003 the Sutton Poyntz pumping station was shut down and work started on re-landscaping the Spring Head water source. Two major parts of this work involved covering the springs with an impermeable membrane and refurbishing the former reservoir



*Seen re-opening the Blaenavon ironworks site are, left to right, Councillor Neil Lewis, Torfaen Borough Council, Councillor Mark Godwin, Mayor of Blaenavon, Alun Pugh AM, Lynne Neagle AM, John Lewis, Custodian at Blaenavon Ironworks, and Tom Cassidy, Chief Executive of Cadw*

*Photo: Cambrensis*

outlet chamber. In order to carry out the latter, it was necessary to remove the strainer from around the outlet. So the funnel became redundant and on 11 November 2003 the last surviving structural piece of ironwork from the *Great Eastern* was lifted from the reservoir outlet chamber at where it had served as a strainer for 143 years.

So what is to become of the funnel? Conservation advice is being sort and options are being explored as to its future. Once established, proposals can then be put to Wessex Water with a view to deciding what is best for one of Dorset's best-kept secrets!

*John Willows  
Sutton Poyntz Water Supply  
Museum*

## Worcester hosts regional conference

The Worcestershire IA & Local History Society hosted a very successful 35th South Wales & West of England Regional IA Conference at the Charles Hastings Education Centre of the Worcestershire Royal Hospital, Worcester, on 24 April. The conference attracted an attendance of no less than 130 delegates. The mayor opened the proceedings and society patron Henry Sandon of TV fame was very much in evidence throughout the day. Lectures were limited to 30 minutes duration (does this reflect reduced concentration span of us older attendees?), covering a very wide range of subjects.

Tony Wherry of the Worcestershire County Record Office spoke on research from ancient maps (the Mappa Munday resides not far away at Hereford cathedral), then Dr Stephen Mills (GSIA) followed on adaptive re-use of the Stroud valley mills. Bernard Mills of the local society gave a fascinating talk on the Kays of Worcester catalogue shopping business, having saved all the firm's records from being skipped. The morning concluded with Richard Newcombe-Guest's illustrated history of the Bishop Castle Railway.

After lunch Monty Ellis (BIAS) gave a dissertation on the 'Telegraph' inns of England and Wales, then next up was Stuart Burroughs from the Bath Museum of Industry, talking about some of the half-million artefacts recovered

from Bowler's mineral water manufactory, which were inspected on the 1987 AIA Bath conference. Derrick Warren (SIAS) then spoke about James Gillingham of Chard, a character who earned fame pioneering artificial limbs, made of hollow leather, to the astonishment of the surgeons who carried out amputations in the nineteenth-century London teaching hospitals. The firm he founded continued in this line until 1950. Gillingham also had lots of other inventions (such as the forerunner of the Zimmer frame) but failed to patent them.

Dr Frank Crompton closed the afternoon with a talk on how the medical museum at the Charles Hastings Education Centre was established. It was open for a visit after the conference. All in all a most instructive day out.

*Roger Ford*

## 22nd South East Region IA Conference

This year's conference was held at Petersfield on Saturday 17 April. It was hosted by the Hampshire Industrial Archaeology Society, whose members did an excellent job in organising and running the meeting. Alistair Penfold of the Hampshire County Museum Service spoke about the development of a comprehensive Hampshire history collection relating to its manufactories and the development of road transport. The inclusion of collections from such well-known companies as Tasker & Sons, Thorneycroft, and Wallis & Stevens made it imperative that proper public access was made available. A site in Basingstoke was offered to build a new museum, and the concept and designs for 'Milestones' were born.

Next Ron Martin of Sussex IA Society spoke about the history of Shoreham Cement Works where the industrial activity on the site dates from the 1850s, and cement was manufactured from at least 1898 until the works closed in 1992. The raw materials of chalk and clay were dug from local pits.

Robert Martin of the Isle of Wight IA Society then spoke about the industrial archaeology of the island. Geology has resulted in the alum industry, brickmaking, glassmaking, stone quarrying, lime-burning, cement manufacture, and

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even coal mining (a very inferior seam of coal). The island's location has seen shipbuilding, aircraft and hovercraft manufacture, mills, yacht building, prisons and military infrastructure.

Still on a maritime theme, Ray Riley's talk focussed on the building of naval capital ships in Portsmouth in the nineteenth and early twentieth centuries. He argued that the study of ships that are no longer in existence is not strictly industrial archaeology, but rather industrial or maritime history. His talk also reviewed the background to the slow introduction of steam into the Navy.

After lunch Stuart Chrystall spoke on the Wey Navigation and its place in the development of river navigation. The route today is almost exactly the same as it was when it was opened in 1653, whereas many later navigations were extensively altered during their lifetimes. The talk investigated the factors influencing the design of navigation and the extent to which

later ones copied, or more often did not copy, the principles adopted by the designer of the Wey Navigation.

The last talk was by the treasurer of the Hollycombe Steam Collection who spoke about the history, and the present day running of this attraction near Liphook that features a large collection of steam driven fairground rides, three railways, traction engines and steam rollers. After the meeting closed many of the delegates went to Hollycombe where a special opening had been arranged.

*Hampshire IA Society*

## Money for mills

The Mills Archive Trust is seeking financial support from anyone interested in the heritage of mills. A national archive specialising in mills and milling is being created and the Trust has raised almost £20,000 from individuals and groups as well as obtaining a £50,000 grant from the Heritage Lottery Fund. This grant was described by the HLF as rating 'one of the best £50,000 we have

spent so far,' and it has given the Trust a good start by putting most of the catalogued content on the Internet.

Most of the money has been spent on specific projects but the Trust needs to build up its regular income to cover regular outgoings. Since starting, the Trust has been promised five very large private collections and over 50 smaller ones, and is gradually taking over the SPAB Mills Section collection. Some 500,000 records are being made freely available to the public.

For information on how to support the work of the Mills Archive Trust, please contact the Chairman of Trustees, Ron Cookson, Watlington House, 44 Watlington Street, Reading RG1 4RJ. Or visit the excellent website:

[www.millsarchive.com](http://www.millsarchive.com).

## New Forum for European Water Museums

Kew Bridge Steam Museum (Great Britain) and the Museum de Cruquius (Netherlands) have joined forces to establish a new forum for water related museums in Europe. The forum has been created as an email group hosted by Yahoo and is intended to act as a discussion group for directors and senior management of any European museum which falls into one of the following categories:

1. Steam-pumping stations that are open to visitors.
2. Feature water management in general and who have devoted a substantial part of their exhibition to the steam-era.

The forum aims to freely exchange ideas, gain more insight into related museums and to build networks resulting in the creation of partner-projects throughout Europe.

Any museum who wishes to join the group should go to:

<http://groups.yahoo.com/group/europeanwatermuseums/>

*Lesley Bossine, Museum Director,  
Kew Bridge Steam Museum*

## Armstrong Mitchell crane in Venice

The Venice in Peril Fund is seeking to restore an 1883 Armstrong Mitchell crane in the Arsenale that is 37 metres high and was capable of lifting 160 tons. It is badly rusted

and Venice in Peril has recently allocated £94,000 to pay for an emergency stabilisation operation and a full technical survey. It is estimated that it will cost 900,000 Euros to restore the crane to its former glory and it is hoped that a restored crane would serve as a monument to British engineering greatness. Anyone interested in supporting this project is asked to contact Venice in Peril, Unit 4, Hurlingham Studios, Ranelagh Gardens, London SW6 3PA, ☎ 020 7736 6891.

## IA Workshop in Romania

An International Conference and Workshop on Industrial Archaeology is being held from 28 September to 3 October 2004 in Baia Mare, Romania. The scientific programme (lectures and debates) will focus on specific industrial archaeology issues in a de-industrialisation transition context. The tours programme will include guided study visits to the historic industrial region of Maramureş as well as other industrial heritage sites in Transilvania. For participants arriving in Bucharest, a brief tour of the industrial heritage of the capital will be organised.

For further details please contact the program coordinator - Irina Iamandescu, Romanian Ministry of Culture and Religious Affairs, Directorate for Historic Monuments and Museums. Address: \_os. Kiseleff 30, Bucure\_tii sector 1, 011347, O.P. 33; ☎ +40 21 224 44 21, Fax +40 21 222 82 39. e-mail: [irina.iamandescu@cultura.ro](mailto:irina.iamandescu@cultura.ro)

## A re-used milestone in Dorset

There is a good sequence of milestones along the A35 between Dorchester and Bridport, each giving the distance between those two Dorset towns. The stone 3 miles out of Bridport bears the additional information that it is 50 miles from Sarum (Salisbury), which may be because it was at or near the western terminus of the Harnham, Blandford & Dorchester Trust, a turnpike established in 1753.

Evidence for the re-cycling of a milestone was observed recently by chance on the A35 to the west of Winterbourne Abbas and 6 miles from Dorchester. The front of the milestone gives 'Dorchester 6' and

'Bridport 9' but the back gives the information in Roman numerals, with an additional distance to Sarum, XLVIII miles (that's 44). As the illustration shows, this side has been damaged and so it would seem the stone was turned around and re-cut. Is this a rarity, or are there many other stones around the country that have received a similar treatment?

*Dorset IA Society*

## Continuity and Change at York

The Society for Historical Archaeology Annual Conference for will be held outside North America for the first time on 5-10 January 2005. The venue will be York, England, and gives a unique opportunity for those interested in all aspects of Historical Archaeology (from the fifteenth century to the present day) to meet, hear of research, and discuss issues of common concern. Heritage management and education are also important topics, and there is also a large section devoted to Underwater Archaeology. The conference theme of Continuity and Change has been chosen to highlight continuities and differences chronologically (from the Middle Ages) and spatially (between European and Colonial and post-Colonial contexts), though many papers will not be closely related to the theme. The SHA website at [www.sha.org](http://www.sha.org) has more information and printable application forms, and a dedicated conference web page can also be found at [www.york.ac.uk/depts/arch/SHA2005/SHAwelcome.htm](http://www.york.ac.uk/depts/arch/SHA2005/SHAwelcome.htm). Conference Chair: Harold C. Mytum,

Department of Archaeology, University of York, The King's Manor, York, England, United Kingdom YO17EP, email: [hcm1@york.ac.uk](mailto:hcm1@york.ac.uk).

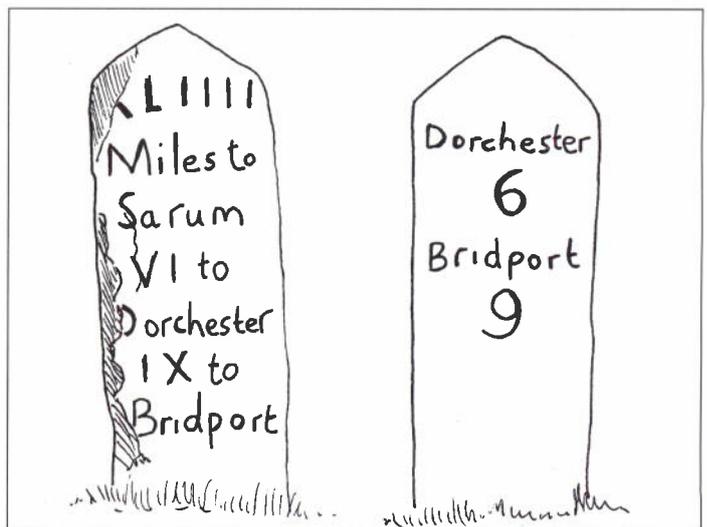
## Transport Trust Awards 2004

Prince Michael of Kent awarded this year's Transport Trusts awards at HMS President, the RNR headquarters in London's St Katharine Dock. The Preservationist of the Year Award went to Mervyn Alcock who demonstrated outstanding leadership in the restoration of Barrow Hill, the UK's last surviving active round-house which has now become a leading heritage railway centre. The young Preservationist of the Year Award went to two brothers, Paul and Peter Howard of the North Norfolk Railway. Lifetime Achievement awards were to Brian Bashall (Land Rover heritage), Raymond Baxter (The Association of Dunkirk Little Ships), George Jago (Old Gaffers) and to John Jolly (for distinguished services to railway preservation). In addition, certificates were also made to winners of the 2003 Transport Trust Restoration Awards. The Transport Trust is the UK's only national charity established to promote and encourage the preservation and restoration of Britain's transport heritage for the benefit of the nation including rail, air and waterborne transport.

*Heritage Link*

## Radio news

The Lizard Wireless Station in Cornwall has recently been listed as the oldest surviving purpose-built radio station in the world.



*Two faces of the Dorset milestone*

The Editor welcomes correspondence on all matters of interest to our readers

### Building the Iron Bridge

I enjoyed reading David De Haan's recent article 'The Iron Bridge - New Research in the Ironbridge Gorge' in *Industrial Archaeology Review* (XXVI, May 2004, No.1, pp 3-19). David's paper formed a useful, and illuminating companion to the excellent BBC2 *Timewatch* programme 'The Mystery of the Iron Bridge'. It presented a lively account of both the research, and reconstructive phases; and afforded an invaluable insight into favoured IGMT research methodologies.

I note that David appears to support the argument that components for the Iron Bridge were cast from a temporary air furnace erected in the square alongside the bridge, rather than at the nearby (600m downstream), riverside foundry at Bedlam Furnace. Alas, he does not cite archaeological and/or historical evidence in support of this hypothesis.

It might be suggested that contemporary writings are currently perceived as carrying more archaeological interpretive weight than the contemporary artistic record? If this be the case, perhaps the most reliable written evidence relating to the casting of components for the Iron Bridge can be found in the 1785 travel accounts of Frenchmen Francois and Alexandre de La Rochefoucauld (Scarf, N., ed., (1995) *Innocent Espionage: The La Rochefoucauld Brothers' Tour of England in 1785*. Woodbridge: The Boydell Press, pp 93-100).

The de La Rochefoucauld brothers were fortunate, upon arrival in Ironbridge, to encounter a workman who had been employed on the Iron Bridge project. However, this was no ordinary 'workman', this was Thomas Gregory - Abraham Darby III's foreman pattern maker, and builder of the mahogany model of the Iron Bridge currently residing in the Science Museum. Gregory (surely a most reliable witness?) arranged for the brothers to tour: '...the foundry where the bridge was made.' This foundry was located: 'At [a] place [where] the Severn runs through a deep gorge...' (pp 95-96). The de La Rochefoucauld account suggests that: the bridge components were cast in a permanent foundry; that the

foundry was still active in 1785; that the foundry was located in the Gorge, on the bank of the River Severn; and that the foundry was part of a concern that smelted iron. Intriguingly, according to this written account, this ironworks also featured a forge equipped with hearths drawing air-blast from either bellows, or a blast main. Furthermore this forge was equipped with powerful waterpowered tilt hammers, and was engaged in making wrought iron via the 'stamping and potting' process. The description of the foundry strengthens the case for Bedlam. However, the waterpowered forge might have been located elsewhere?

I sincerely hope that David will present his archaeological and/or historical evidence for bridge casting in the square at Ironbridge. Unfortunately, without citing valid evidence in support of his claim, David's paper may legitimise and entrench another Ironbridge IA myth.

Paul H. Vigor  
Telford

### Monasteries of manufacture

The publication of Paul Belford's article 'Monasteries of Manufacture' in *Industrial Archaeology Review* (XXVI, May 2004, No.1, pp 45-62) details several Birmingham scenes. Birmingham industry has been a study of mine for some time now. Sutton has published one of my books on the subject and another is almost ready for publication. Paul Belford utilised a number of illustrations from the GWR Guide 1863 and I have seen others in previous annual publications, for example 1860. They do, of course, provide useful representations of factory buildings, like the balloon views published in later years.

I am not so sure about the monastic connection being applicable in all cases, however, as several factories in the Birmingham district seemed to evolve as one manufacturer took over the premises of another. Another factor, which might be considered is that these drawings were put together by artists and reflected an artistic view changing perspective in some cases and highlighting certain features such as chimneys to best

advantage. Paul Belford does not include the classic illustration of the Tangye Factory at Smethwick complete with its ranges of ordered buildings and masted sailing craft on the Birmingham Canal Navigation!

Charles Reeves' Toledo Works appears to have been a works transformed by changing occupation. The illustration published is one similar to that in 1860 and so some were clearly carried through for a number of GWR guides. It shows the works in Charlotte Street looking towards George Street, Birmingham. The canal arm was Whitmore's Arm, a private waterway owned by the Colmore Family. Toledo was a special type of steel particularly favoured for sword making. Whilst it might seem appropriate to assign the role of cementation furnace to the cone at the rear of the buildings facing what might be the George Street side of the property, I believe the original purpose of the cone was glass manufacture. Early Colmore Estate records mention the land as let to John Gold, Glasscutter. A Birmingham Journal Sales Advert (27 February 1858) mentions St Pauls Glassworks, George St, with eight pots and cone in the occupation of Thomson and Wilson. There is therefore reason to doubt that its purpose was the same as the cementation furnaces that existed at the Brades, Oldbury and William Hornblower at Brierley Hill and more likely had a different role associated with the making of flint glass.

Elkington's works was another location that changed with modification. The original metal

rolling mills established by James Mills were located at the top of the engraving and also bordered on the Miss Colmore Canal. The steam driven rolling mills changed hands and eventually came to the Elkington family who continued the metal rolling business until the more lucrative business for which they are best known was established on the site. The style of the later additions reflects the affluence to which they achieved. The original metal rolling buildings would have been far more basic, I suspect.

Ray Shill  
West Midlands Group Secretary  
Railway & Canal Historical Society

### Skills, society and songs

I would agree with Peter Hughes (Letters, *IA News* 129, page 11) that we underplay the importance of technical ability in society, unless it is connected with computers. Indeed, wearing my 'hat' as Hon Vice President of the National Piers Society, I'm happy when we're in a position to present the Peter Mason award for excellence in piers' engineering.

Yet I can't accept the argument that 'art, poetry and music can only exist if we have leisure.' For didn't the *Guinness Book of Records* used to note that the oldest known song is 'Chadouf', sung since time immemorial by irrigation workers on the man-powered treadwheel Nile water mills in what is now the United Arab Republic? And work has proved a powerful influence on culture ever since.

Tim Mickleburgh  
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## VISIT THE AIA WEBSITE

[www.industrial-archaeology.org.uk](http://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.

**North West England**

Nelson, one of the former cotton weaving towns of East Lancashire, is very much a creation of the nineteenth century, although the adjoining towns of Burnley and Colne are much older. Nelson grew up around the Nelson Inn, hence its name, after the railway opened a station there in 1849 to serve the districts of Marsden and Barrowford. The textile industry was already established in the area by that date and some early mills, such as Lomeshaye, had been built for spinning. However, by the early twentieth century, when it had become the fourth largest weaving town in Lancashire, there were no spinning mills. Some of the mills in Nelson were amongst the largest in Lancashire, housing over 2,000 looms, operated on the Room-and-Power principle and specialising in weaving fine cloths. Weaving mills consist largely of single storey sheds, with north-light roofs, for housing the looms but most Nelson mills have large multi-storey warehouse and preparation blocks.

The mills line the Leeds & Liverpool Canal and Walverden Water with some later mills positioned on Hendon Brook, a lesser water course which needed augmenting by reservoirs. Surrounding the mills are streets of terraced housing which, with the ever-present backdrop of Pendle



*Rupert Street, Nelson. Co-op shop, terrace houses, Spring Bank Mill (still weaving) and the green hills beyond*

*Photo: Roger N. Holden*

Hill, creates a distinctive sense of place. Parts of this landscape have been lost already. Only three chimneys survive in anything like complete state, and one of these is disfigured by mobile phone aerials. A 1960s shopping centre took out part of the town centre. The three large nonconformist chapels which occupied the town centre, forcing the established church to the periphery, have been demolished, Carr Road Wesleyan Methodist as

recently as last year. Lomeshaye Mills and attendant housing has been cut off from the town centre by the motorway. One, possibly unique, survival is the Socialist Institute of 1907 in Vernon Street; 'Socialism Our Hope' reads the slogan over the front door, but it is a moot point whether their hopes have been fulfilled or not.

This landscape is now under threat, amazingly from falling house prices, a phenomenon which has

affected other East Lancashire towns including Colne and Burnley. In recent years it has become almost impossible to sell property in certain parts of these towns and houses have been abandoned. The response of the councils has been to seek demolition of the affected housing and replacement with modern, lower density, 'sustainable' housing. Some demolition has been carried out in the Southfield area of Nelson while Burnley proposes to demolish some 300 houses this year. Although the councils appear to blame the terraced housing itself ('unpopular and socially obsolete' claims Pendle Council), elsewhere in the North West such property is in demand suggesting that the real problems are social and economic ones which may not be solved by this 'back to the 1960s' approach. 'Don't demolish our homes, help our community' reads a plaintive notice in front windows of houses in the Daneshouse area of Burnley. However, a compulsory purchase order by Pendle Borough Council for houses in the Whitefield area of Nelson met with much more serious opposition. This was applied for in 2001 at the same time as a small area around St Mary's Church was designated as a Conservation Area, showing some recognition on the Council's behalf of the historic value of the landscape. However, the Heritage Trust for the North West who already owned certain property in the area, including the redundant



*Spring Bank Mill, Nelson, still weaving in 2003*

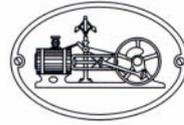
*Photo: Roger N. Holden*



Nelson old and new: the minaret of the mosque competes with the chimney of Pendle Street Shed for command of the skyline  
Photo: Roger N. Holden



Houses in Mosley Street await their fate – demolition or renovation?  
Photo: Roger N. Holden

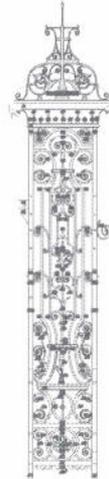


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St Mary's Church and Lomeshaye Bridge Mill, considered that the Conservation Area should be widened to include those properties proposed for demolition and they were supported in this by English Heritage and the Victorian Society. English Heritage found that, contrary to the claims of the Council, none of the houses were unfit to live in and were all capable of being improved. Following a public inquiry the Compulsory Purchase order was rejected in September 2003. In the meantime, the Council had in fact purchased much of the property, but following this announced that they were to work with English Heritage to develop a new plan for the Whitefield area. The Heritage Trust for the North West has agreed to purchase and renovate some of the houses. But the wheels of Government move more slowly than markets and the ripples of the rising house market over the last year have even reached East Lancashire, perhaps rendering the demolition policy obsolete.

But for those who prefer traditional water mills to the vast mills of Nelson, the North West also has plenty to offer. Recently, Mike Redfern and other volunteers at the National Trust's Nether Alderley Mill in Cheshire have been carrying out a detailed survey and have been able to greatly extend our understanding of this mill, which is unusually powered by two waterwheels in tandem. They have been able to establish that the mill was in existence by 1598 and some timbers in the mill would appear to pre-date a major rebuilding of that year. Some twelve distinct phases have been identified in the development of the mill, which cease operating in 1939. One interesting feature of the survey is the analysis of graffiti found in the stonework and woodwork of the mill, much of which has been traced to the various millers and their families. The mill is open from April to the end of October on Wednesday to Friday, Sunday and Bank Holiday Mondays from 13.00-17.00 (last entry 16.30) when the machinery is

run although unfortunately no milling can be carried out.

Elsewhere in the North West, Park Mill at Royton near Oldham, a cotton spinning mill dating from 1912, was demolished earlier this year while in Stockport Woodrow's Hat Works, one of the few surviving purpose-built hat works in the town will probably have gone by the time this appears in print. Bolton Council has regrettably decided not to develop the building next to the Northern Mill Engines Society as a museum where the important collection of textile machinery currently held in store by the Council could be displayed. A consultant's report instead recommended that the area around the existing central museum and art gallery should be developed as a 'cultural quarter' (a currently fashionable concept it seems) although whether textile machinery is included in their concept of 'culture' is unclear.

Roger N. Holden

## Greater London

After many years of privacy Paddington Basin, the 1801 London terminus of the Grand Junction Canal, is now accessible to the general public. One can at last walk along the towpath which borders the west side of the Paddington Arm from the vicinity of St Mary's Hospital right through to Little Venice. A great deal of redevelopment, largely for office accommodation, is taking place in the area and yet another 'Dockland' is being born. What is happening here along the canal is reminiscent of, say, Nottingham or Bristol, but owing to higher property values much taller office blocks are being built. The pedestrian areas are presently well populated and the public seems well pleased with the new amenity.

In mid-May a JCB was removing the last remnants of the abutments of I. K. Brunel's cast-iron girder bridge for Bishop's Bridge Road (see the article by Malcolm Tucker in *IA News* 129, pp 2-3). Since Malcolm's photographs a section of the canal was dewatered by constructing two temporary dams made from waterproof tarpaulin supported on iron frames and founded on beds of fresh gravel.

The large-scale redevelopment to the north west of Paddington Station has been of some benefit to the conservation movement. For a

number of years a real problem building has been the former British Railways road parcel van garage and maintenance depot. When the M40 Westway was built railway land was taken for its construction and in compensation a new building for British Railways was erected. The site, between Westway and the canal was very confined. The garage to the east was tucked away next to the canal beneath the Harrow Road roundabout. It has a dramatic pre-cast roof with a high glazed clerestory. The roof's exterior is clad with zinc. This garage is often unnoticed but when the west block is considered, poking up above Westway, the quality of the architecture is readily apparent. It contained offices, workshops and mess rooms. Designed by Paul Hamilton and John Bicknell (see below) and built in 1966-68, the Paddington Maintenance Depot was finally listed Grade II\* in April 1994. The problem since has been to find a use for it and it has been featured on national television as an almost hopeless cause. However, the fashion company Monsoon is now using the building for its headquarters and with the surrounding area rapidly approaching the status of Canary Wharf this icon building should have an assured future.

While working for British Railways, Bicknell and Hamilton had designed a number of signal boxes for the Eastern and Midland Regions and Harlow Town Station (1959-60) listed Grade II. They later set up in private practice, designing Birmingham New Street signal box 1964-66 (listed Grade II). Paddington Maintenance Depot is the last of their railway buildings and is reckoned to be the finest. It was given an award by the Concrete Society in 1969 and a Civic Trust Award 1970.

On Good Friday 9 April 2004, Midland trains ceased forever to use the magnificent 245 feet clear span train shed at St Pancras. After 136 years of use this was indeed an historic event. On Easter Monday 12 April, Midland services restarted from a temporary Interim station to the north east of the old train shed. After Midland trains are transferred to their final new home further west in 2006, the Interim station will become the terminus for commuter trains to Gravesend and Kent via the Channel Tunnel Rail Link (CTRL). This



The site of the Brunel Bridge at Paddington Basin, with the last remnants of the abutments being cleared away. Note the temporary dams closing the canal Photo: R. J. M. Carr

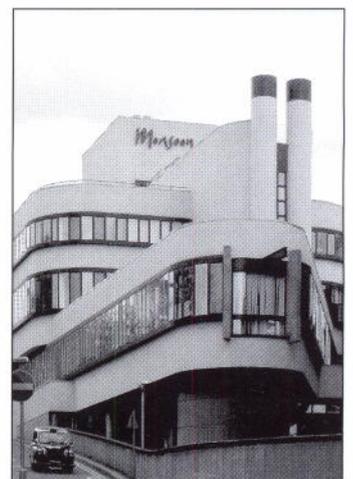
new station is close to what remains of the Munich-style German Gymnasium of 1864.

To the north and west of the St Pancras train shed the whole area of brick railway viaducts which supported the tracks of the Midland Railway has been cleared, down to ground level. The sheer scale of the demolition is prodigious; the amount of brickwork removed has been vast. An idea of the scale of demolition can be gained when it is pointed out that 60 million bricks were used in building St Pancras station and its approaches. The demolition work was completed rapidly by mid-June 2004 and it is now exceedingly difficult for anyone who did not know the vicinity of Midland Road to comprehend what the area was like for close on 140 years. The Midland Railway had an overwhelming presence here and the ubiquitous red brick, gothic arches, and a plethora of former coal drops and coal offices was almost oppressive to anyone not entirely in tune with Victorian taste. Part of London with a unique and unforgettable character has vanished. From the Barlow trainshed northwards to Old St Pancras Churchyard every railway arch has gone. This complete clearance is if anything more dramatic than that which took place on the east side of St Pancras station over Christmas 2001. It must surely be true in terms of the volume of material removed. Many of the 1860s bricks disposed of are said to have been manufactured by child labour.

Tunnelling work beneath the North London Railway and out to the east is now nearly completed

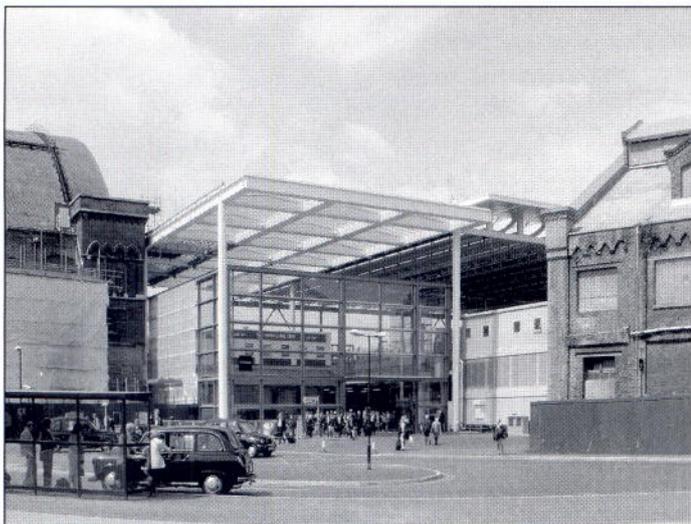
and at the site of the new 2,065-ton CTRL bridge across the East Coast Main Line north of King's Cross station, the twin bores of the great tunnel at the Western Portal are now clearly visible. Apart from a short breathing space at Stratford, this long tunnel will stretch from the Western Portal at TQ 303 841 to the Ripple Lane Portal TQ 488 830, just west of the Ford Motor Works, Dagenham, a total distance of nearly 12 miles and half the length of the Channel Tunnel itself.

At Stratford the line will emerge into the Stratford Box, a trench 1066 metres long. A new international station is to be built here and many foreign visitors will get their first taste of England arriving at Stratford. Wags have joked that Anne Hathaway's cottage is, and that in order to satisfy the demand one will be built. The area



Former Paddington Maintenance Depot, 1966-68 listed grade II\*, now the Monsoon headquarters

Photo: R. J. M. Carr



St Pancras Interim Station. This new station is close to what remains of the Munich-style German Gymnasium of 1864, seen on the right. Part of the great Barlow train shed is on the left  
Photo: R. J. M. Carr

surrounding and to the south east of the new station is the subject of large-scale expenditure and is being radically transformed by redevelopment. The aim of this is partly to present a suitable first impression of Britain. The 2012 Olympic Stadium might be built to the north west at Hackney Wick and if this takes place a very great transformation of the Lower Lea Valley will ensue. Inevitably, what industrial archaeology there is will in the main be swept away. Delegates attending the 2004 AIA Conference will have the opportunity of visiting this area before any impending wholesale clearance.

Rather than being extracted from the CTRL tunnel works in the traditional manner using shafts, spoil was taken to Stratford underground by rail along the completed line, where a great mound either side of the Stratford Box is being formed. Material excavated from the Box was also placed here and presently the mound is as high as 16 metres above the existing ground level. The intention is to spread out this great pile to form a plateau about 6 metres above ground level and the local redevelopment will take place on top of this. Little if anything can now remain of the former railway works where so many famous Great Eastern locomotives were built or the huge motive power depot which in 1923 had an allocation of 555 locomotives. They are just buried.

As is usual in large tunnelling operations the CTRL tunnel boring machines (TBM) were

distinguished by names. Between Stratford and King's Cross we had 'Bertha' and 'Annie' on Contract 220, where they finished on 27 January. To the east of Stratford, 'Brunel' and 'Hudson' had completed their boring for Contract 240 by December 2003. The remainder of the tunnel to the Ripple Lane Portal, Contract 250, used 'Judy' and 'Maysam' and boring there was finished on 24 February this year. These six TBMs will now be industrial archaeology and may already have been reduced to scrap.

The extensive tram system centred on Croydon continues to provide a frequent service but, despite a number of tramway schemes in the pipeline for other parts of London, no actual building work seems likely in the immediate future. The traditional London Routemaster bus with conductor and open rear platform remains in service but their numbers are diminishing as new replacements are introduced.

The Wembley stadium site presently sprouts a veritable forest of cranes. Demolition of Sir Owen Williams' 1923 stadium began in September 2002 and the beloved twin towers are no more. Their passing seems to have been quite unpopular with football fans who had hoped they at least would have been incorporated into the new development. Some smaller items were salvaged from the old stadium and have gone to the Brooking Collection at the University of Greenwich. The conspicuous new 133-metre tall arch has been raised.

With a length of 315 metres (1,033 feet) it is the world's longest single roof structure. The new Arsenal stadium is being built at Ashburton Grove.

The former LNWR hydraulic accumulator tower close to the canal and next to the West Coast main line railway at Camden (TQ 283 839) has been restored and now serves as a staircase and lift tower for an adjacent housing development. An article by Tim Smith in the recently published *London's Industrial Archaeology* number 8, pages 38-45, describes this tower.

Funding has been obtained for the Pump House Museum project Walthamstow E17 (TQ 362 882), which currently is mainly concerned with transport. However a long-term aim is to establish a museum of the industries of the Lea Valley. There is a lively programme of events this year (☎ 020 8521 1766). We shall hear more of this site at the next AIA Conference.

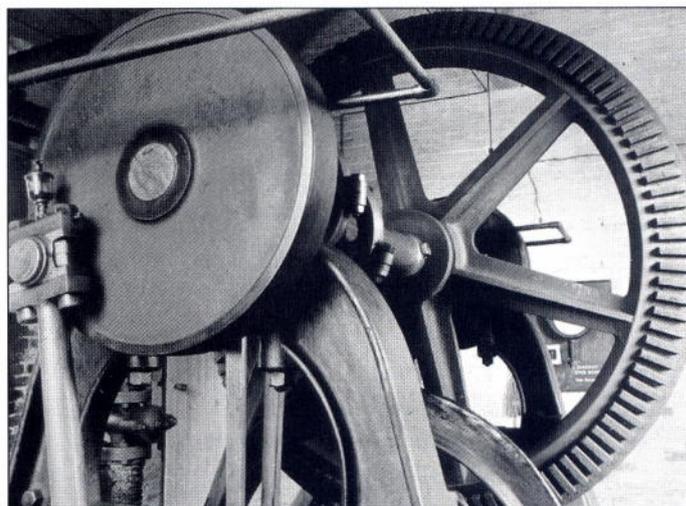
Robert Carr

## West of England

At the recent AIA 'research' seminar at the University of Nottingham, AIA president Angus Buchanan reminded delegates of the early days of IA and the high-profile conservation battles that eventually led to the formation of local societies and, in 1973, of the AIA itself. Whilst few such issues now hit the headlines, we are probably more effective in our approach as local societies in the regions go about their careful, often confidential, and persistent work to identify and protect buildings and landscapes. In

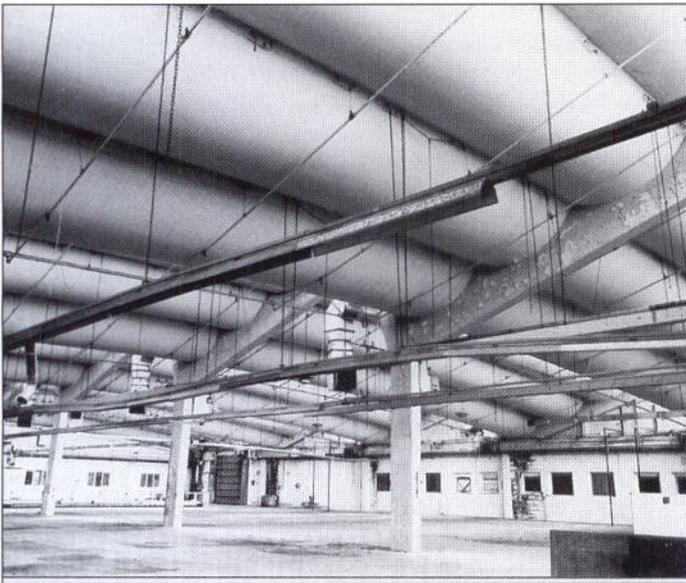
many cases it is a 'long game', as witnessed by recent developments in Bristol. Two sites mentioned in *IA News 122* are again in the public eye: new plans for the 'undeveloped' two-thirds of the old George's Bristol Brewery are shortly to be registered and we have just had news of yet another public enquiry (in February 2005) concerning the proposed development of the old Bristol United Breweries maltings site. The proposals for the brewery are far better than those previously approved – all being well, the most significant parts of the (unlisted) brewery buildings and the significant remnants of the old sugar refinery will be retained, in addition to the Grade II listed former tramways generating station on the site. Plans to reopen the Clifton Rocks Railway in Bristol as part of a major refurbishment scheme for the Avon Gorge Hotel have just been announced. This funicular railway, near Brunel's famous bridge, was opened in 1893 and ran through a tunnel at a gradient of 1 in 2.5 to connect Clifton to Hotwells until closure in 1934. The cost of restoration is estimated at £10-15 million.

From Somerset Brian Murless reports on SIAS involvement in the Grade II listing of a former shirt factory in Taunton, Shirt and collar manufacture were quite significant in Somerset and Devon and a few of these buildings have been studied or protected in this way. The three-storey brick St Augustine Street premises date from 1899. It is threatened by plans of Somerset County Cricket Club to expand their nearby ground. SIAS is also working



The steam drainage engine at Allermoor on the Somerset Levels

Photo: SIAS



Interior of the Hepworth building, Morland's tannery at Glastonbury  
Photo: Brian Murless



This listed shirt factory in St Augustine Street, Taunton, is threatened by redevelopment  
Photo: Stephen Miles

hard to secure the survival of Allermoor Pumping Station where steam-driven pumps raised water from the levels for eventual outflow to the Bristol Channel. The original Easton & Amos engine and pump survives, as do the engines from Stanmoor (1864) and Southlake (1869) that were rescued and stored here by a former chief engineer to the Somerset Rivers Board. SIAS has also contributed to the recording of a former Morland's tannery at Glastonbury. This innovative ferro-concrete building by Arthur Hepworth (1911-2003) had an impressive steel roof supported by 48 prefabricated concrete beams.

The need for constant vigilance in the protection of out transport heritage comes from South Gloucestershire where the cast-iron plate from a milestone at Hawkesbury Upton on the current A46 (thought to be eighteenth century) was removed and offered for sale in the ebay internet auction site. David Viner, Chairman of the Milestone Society, has made strenuous efforts to involve the police and local council to stop the sale.

In North Dorset, the important industrial site at Bourton Mill is the subject of a planning application for 43 houses, doctor's surgery and business units. The site on the River Stour was the home of the famous E.S. Hindley foundry that once employed 200 workers and exported its work throughout the world. A fair proportion of the site is covered by a relatively modern factory, now

disused, but the original mill building and wheelpit for the famous 60-foot diameter waterwheel, remain mainly intact. There also remains what is said to have been a row of workers' cottages, later used for other purposes, but these appear to be in poor structural condition.

Finally, we have news of a development that might well be of major significance to the future study of IA in the South West.

Somerset County Council is to co-ordinate the production of a research framework for archaeology in South West England – defined here as Gloucestershire, Wiltshire, Somerset, Dorset, Devon and Cornwall – for English Heritage. This is the largest of the nine English regions and covers some 18 per cent of the total area of England. The work will be completed over the next two years and is structured into eight 'themes', of which 'industrial/

modern' is the most recent. The development of these regional strategies is very important for IA and the AIA will need to draw upon the expertise and knowledge of local and county groups in the South West to ensure IA is well represented in this study.

Mike Bone

## REGIONAL CORRESPONDENTS

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

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### 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  
Graham Brooks, Coomara, Carleton, Carlisle, Cumbria CA4 0BU

### 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  
Roger N. Holden, 35 Victoria Road, Stockport SK1 4AT

### Region 6: WALES

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### Region 7: WEST MIDLANDS

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### Region 8: EAST MIDLANDS

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### Region 14: SOUTH WEST ENGLAND

Devon and Cornwall  
VACANT, volunteer urgently required.

## PUBLICATIONS

### Local Society and other periodicals received

Abstracts will appear in *Industrial Archaeology Review*.

*BIAS Newsletter*, 1, February 2004  
*Brewery History*, 113, Autumn/Winter 2003  
*Brewery History Society Newsletter*, 27, Spring 2004  
*Dorset Industrial Archaeology Society Newsletter*, 8 & 9, February & May 2004  
*Focus on Industrial Archaeology* (Hampshire Industrial Archaeology Society), 62, June 2004  
*GLIAS Newsletter*, 212, June 2004  
*Hampshire Industrial Archaeology Society Journal*, 12, 2004  
*Images of England*, 9, 2004  
*Industrial Heritage*, 29/3, Winter 2003 & 30/1, Spring 2004  
*Lancashire History Quarterly*, 7/3, Winter 2003 & 8/1, Spring 2004  
*London's Industrial Archaeology*, 8, 2004  
*Manchester Region Industrial Archaeology Society Newsletter*, 107, May 2004  
*The Mundling Stick* (Lion Salt Works Trust), 10/1, Spring 2004  
*Nottinghamshire Industrial Archaeology Society Journal*, 29/1, March 2004  
*Post-Medieval Archaeology*, 38/1, 2004  
*Scottish Industrial Heritage Society Bulletin*, 31 & 32, May & June 2004  
*Somerset Industrial Archaeological Society Bulletin*, 95, April 2004  
*Suffolk Industrial Archaeology Society Newsletter*, 85, May 2004  
*Surrey Industrial History Group Newsletter*, 139, May 2004  
*TICCIH Bulletin*, 24, Spring 2004  
*Wind and Water Mills* (Midland Wind and Water Mills Group), 23, 2004  
*Yorkshire History Quarterly*, 9/3, February 2004

### Books Received

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

*British Anti-invasion Defences, 1940-1945*, by Austin J Ruddy. Storrington: Historic Military Press, 2003. 32 pp, illus. ISBN 1 901313 20 4. £3.49. Obtainable from the publisher, Freepost SEA 11014, Pulborough, West Sussex RH20 4BR.

Pocket reference guide detailing the network of anti-invasion defences constructed in Britain during World War II. Sited at road junctions, railway embankments, alongside canals, on farms, estates and along the beaches many of these structures, commonly called 'pillboxes' soon became common sights throughout the country. This book provides a brief and concise insight into the history of pillboxes, anti-tank obstacles, airfield and other defences which have survived the passing of sixty years of development and erosion. Well-illustrated in colour, with plans and grid references to various examples, this book will prove a useful handbook for fieldwork.

*Landscapes of Technology Transfer: Swedish Ironmakers in India 1860-1864*, by Jan af Geijerstam. Stockholm: Jernkontoret, 2004. 456 pp, illus. ISBN 91 974131 5 1.

This hardback book contains the full material upon which the author delivered a paper at the TICCIH2000 Congress in London which subsequently appeared in the Transactions. The introduction discusses the questions raised and the investigative method. It is followed by four parts and a final discussion. The parts cover the Colonial Context and Histories of Iron; The Stage and the Key Players; Technology Carried; and Projects in a Global System. The book is highly detailed, fully referenced with a bibliography and beautifully produced.

*The Archaeology of Industrialization*, ed. by David Barker & David Cranstone. Leeds: Maney, 2004. 340 pp, 115 illus. ISBN 1 904350 01 1. £58.00 (£29.00 to delegates, £43.50 to AIA and SPMA members).

This hardback volume includes the papers given at the Archaeology of Industrialization Conference held in Bristol in October 1999. Organised jointly by the AIA and SPMA, some 21 papers are published, together with an introduction and conclusion. The papers are grouped under headings: 'Approaches to the Archaeology of Industrialization', 'Industry in the rural landscape', 'Landscapes of mining', 'Settlement and the urban landscape', 'Artefacts and industry', 'Material culture and social change' and 'The influence of the past on the present'.

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Main Conference Friday 13 August to Sunday 15 August

Post-conference programme Sunday 15 August to Thursday 19 August

Last chance details from: The AIA Liaison Officer, AIA Office, Department of Archaeology, University of Leicester, Leicester LE1 7RH. ☎ 0116 252 5337, Fax: 0116 252 5005, e-mail: AIA@le.ac.uk

**13-19 AUGUST 2004  
AIA ANNUAL CONFERENCE:  
HERTFORDSHIRE & LEA  
VALLEY**

at the new de Havilland Campus of the University of Hertfordshire, Hatfield. Your last chance to book! Contact the AIA Liaison Officer for information (address on page 2).

**16-19 SEPTEMBER 2004  
THIRD INTERNATIONAL  
EARLY RAILWAYS  
CONFERENCE**

at the National Railway Museum, York. For details contact: Early Railways Conference Office, National Railway Museum, Leeman Road, York YO26 4XJ, ☎ 01904 621261.

**28 SEPTEMBER – 3 OCTOBER  
2004  
INTERNATIONAL  
CONFERENCE & WORKSHOP  
ON IA**

at Baia Mare, Romania, with lectures and study visits. For details contact: Irina Iamandescu, Romanian Ministry of Culture & Religious Affairs, Directorate for Historic Monuments and Museums, e-mail: irina.iamandescu@cultura.ro. See page 12 for more information.

**28 SEPTEMBER 2004 - 8  
MARCH 2005  
SIHG INDUSTRIAL  
ARCHAEOLOGY LECTURES**

at the University of Surrey, Guildford, the Surrey Industrial History Group's 29th series of 11 fortnightly lectures on wide-ranging topics including paper making, canal lifts, straw hats, sound mirrors, John Logie Baird and television, WWII boatwomen, the Wealden iron industry, Robert Mann Lowne and Inspiration and Perspiration. Details from Stuart Chrystall (SIHG lectures), Dene Lodge, Drovers Way, Ash Green, Aldershot, Hampshire GU12 6HY.

**2 OCTOBER 2004  
THE ARCHAEOLOGY OF  
INDUSTRIAL PROCESSES,  
PART ONE**

at the London Archaeological Archive & Research Centre, London, to cover the results of recent archaeological investigations of industrial processes and production sites in London, the south of England, Europe and the East. For information, contact Paul Belford, Ironbridge Archaeology, Ironbridge Gorge Museum Trust, Coalbrookdale, Telford, TF8 7DQ, e-

mail: paul.belford@ironbridge.org.uk, or Frank Meddens, Pre-Construct Archaeology, Brockley Cross Business Centre, 96 Endwell Road, London, SE4 2PD, e-mail: meddens@vossnet.co.uk

**6 NOVEMBER 2004  
THE ARCHAEOLOGY OF  
INDUSTRIAL PROCESSES,  
PART TWO**

at the Ironbridge Gorge Museum, Coalbrookdale, the second part of this unique conference will cover the results of work done in the Midlands and North of England, and in the Atlantic World. Contact details as for Part One.

**5-10 JANUARY 2005  
CONTINUITY AND CHANGE**

at York University, the Society for Historical Archaeology's Annual Conference on all aspects of historical archaeology from the fifteenth century to the present day. See page 12 for more information.

**2-3 APRIL 2005  
AIA IRONBRIDGE WEEKEND**

at the Ironbridge Institute, Coalbrookdale. Advance notice only.

**23 APRIL 2005  
SOUTH EAST REGION IA  
CONFERENCE**

at Chertsey Hall, Heriot Road, Chertsey, Surrey, hosted by Surrey Industrial History Group. Advance notice only.

**8-10 JULY 2005  
NAMHO CONFERENCE 2005**

at Juniper Hall Field Centre, Mickleham, near Dorking, Surrey, organised by the Wealden Cave & Mine Society with the assistance of the Chelsea Speleological Society, Kent Underground Research Group and Subterranea Britannica. A programme of lectures, underground and surface trips, focusing primarily on medieval and post-medieval underground building-stone quarries, chalk mines and underground quarries, and the Wealden ironstone mines. For details see the website: <http://namho2005.wcms.org.uk> and for further enquiries e-mail: namho2005enquiries@wcms.org.uk, or ☎ 01737 243912, or write to Robin Albert, 13 Beaufort Road, Reigate RH2 9DQ.

**PLEASE VIEW THE AIA  
WEBSITE'S DIARY SECTION  
FOR THE LATEST NOTICES  
OF CONFERENCES AND  
MEETINGS**

*Information for the diary should be sent directly to the Editor as soon as it is available. Dates of mailing and last dates for receipt of copy are given below. Items will normally appear in successive issues up to the date of the event. Please ensure details are sent in if you wish your event to be advised.*

*Please view the AIA Website's Diary Section for the latest notices of conferences and meetings.*

[www.industrial-archaeology.org.uk](http://www.industrial-archaeology.org.uk)



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*Final copy dates are as follows:*

- 1 January for February mailing
- 1 April for May mailing
- 1 July for August mailing
- 1 October for November mailing

*The AIA was established in 1973 to promote the study of Industrial Archaeology and encourage improved standards of recording, research, conservation and publication. It aims to assist and support regional and specialist survey groups and bodies involved in the preservation of industrial monuments, to represent the interests of Industrial Archaeology at national level, to hold conferences and seminars and to publish the results of research. The AIA publishes an annual Review and quarterly News bulletin. Further details may be obtained from the Liaison Officer, AIA Office, School of Archaeological Studies, University of Leicester, Leicester LE1 7RH.*

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



*Twin beam water pumping engine from Dancers End, Tring, built by James Kay, c1867 (see page 6)  
Photo: Kew Bridge Steam Museum*