Industrial heritage in Western Australia

A trip to Western Australia was arranged by Heritage of Industry to coincide with the 14th Conference on Engineering Heritage organised by the Association of Engineers of Australia in Perth on 18-22 November 2007. We were a party of ten AIA, GLIAS and Newcomen Society members from the UK and an Australian librarian.

Richard Hartree

Our party met in Perth on 5 November to start the trip with a flight northward for a night in Tom Price and a visit to the Rio Tinto iron ore mining operations in the Pilbara region. This is a vast area of rich 2.5 billion year old Banded Iron Formation ores which are being extracted in huge open pit mines. The Tom Price mine was opened in 1966 and 1000 Megatons have been extracted. The scale of operations was mind boggling: the mine diggers, the huge dumper trucks carrying the ore to the processing plant, the ore handling and automatic loading of the trains of 232 cars (non-stop at 1.8 km/hr) each holding 105 tonnes hauled by two 3MW engines. These travelled, with those from nine other mines in the area, on a dedicated network of 1600kms to the ship loading port. We made the journey to the coast by coach following the rail track much of the way, getting a good appreciation of the raw landscape.

The following day we saw the wagons unloaded by rotating them two at a time without uncoupling; the vast stockpiles of ores of different types, averaging 55-60% Fe; the huge bucket wheel recovery diggers; the miles of ship loading conveyor belts; and we learnt about quality control, how they coped with cyclones and many other things. We visited the railway control centre and workshops. One of our members drove a training simulator for drivers, but once the downhill fully loaded trains. We made the journey to the coast by coach following the rail track much of the way, getting a good appreciation of the raw landscape.

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for conserving its Worthington-Simpson engines. These boilers, and the locomotives, needed purer water than that flowing in the pipe and rainwater catchments were built adjacent to granite outcrops. We saw one at Karralee. It was, in effect, the industrialisation of an Aboriginal practice for fresh water supply! The pipeline continues in operation, now using electric pumps and concrete lined pipe with replacements based on spirally welded pipe; some 60% of the original pipe, concrete lined, is still in use. The pipe network has been greatly extended to provide irrigation water for agriculture. The original O’Connor scheme is Australian Engineering Heritage’s greatest work. The National Trust of Australia has created a signposted heritage trail which includes the major sites along the pipeline.

The following day a small coach took us to Coolgardie, where the gold rush started. A few good buildings remain on the very wide main street down which large ‘road trains’ now thunder on their way to the trans-continental highway. The wide streets originate from the space needed to turn the camel trains which were the best form of transport in the early days; the camels, and drivers came from NE India and Afghanistan! We had a guided visit to the Government Battery of 1913 where the prospectors brought their ore finds for processing and assessment. Then we set off into the bush to see the sites of early mines and associated ghost towns. Our driver, Harry Angus was a local man whose family had owned a station (large farm) in the area and could tell us where the schools, playing fields and racetracks had been in the good times although there was very little to see in the bush. His memories brought the places alive for us. He described much of bush as pasture land. There was not a blade of grass to be seen but he said that sheep and cattle nibble the bushes and there is grass after the rains. The stock density was 20 acres for a sheep (in Gloucestershire it is five sheep to an acre!) and 30 for cattle. Our lunch was a ‘barbie’ at what is left of the hotel of Ora Banda, the ‘town’ near which our guide had been brought up.

The next day was off to the Super Pit gold mine at Boulder, close to Kalgoorlie. This made the Tom Price mine look small! Again the base rock is 2.5 billion years old. The tailings are huge, only grams of gold come from each tonne removed. We went on to visit the town of Boulder with its restored buildings including the Town Hall’s theatre with its remarkably effective perspective on the proscenium curtain and the customary pressed metal, rather than plasterwork, decorative ceiling. Dame Nellie Melba had a sell-out performance there and sang from the balcony to the crowd outside who had no tickets. We visited a good mining museum and had the opportunity of an underground visit led by strongly accented, rapid speaking guide who was informative and entertaining.

Our day was rounded out by a visit to the Eastern Goldfields Historical Society, of which Harry Angus is vice president. Here we were kindly given tea and shown the records and artefacts they have and continue to assemble. It is
a very impressive venture by the enthusiastic members.

The following day, before leaving Kalgoorie, we made a quick visit to the Royal Flying Doctor Service base at the airport. Like our RNLI, it is a charity and has to raise the funds for its capital expenditure. The professional staff is paid out of state funds related to the number of calls and trips made. The concentration of intensive emergency care facilities at Perth has lead to an increase in inter-hospital transfers. RFDS is paid for the transfers but not for the extra aircraft!

Then our day trip, of 150 miles each way, on the coach with Harry to go north to Leonora and see the latest ghost town, and the house where Herbert Hoover lived as mine manager. The Gwalia pit had been an underground mine. In 1963 the owners announced its closure as it was uneconomic. Two special trains were organised for the people to leave by. They left behind any belongings they could not carry. The empty houses and contents are still there, preserved in the dry climate and with nothing worth looting. It was a sad reminder of the transience of mining ventures. The mine has reopened as an open pit. But no one lives in the old town.

Our return to Perth was by the high-speed ‘Prospector’ train made up of air conditioned two and three car DMUs. It was unfortunately delayed by works on the track and the priority given to freight trains on the single track line. It was clocked at 90mph for a brief time. The journey was comfortable and gave us a different view of the bush, salt flats and the wheat growing landscape; without concentrating on the engineering heritage of the water pipeline.

After a day in Perth we met with the other 20 Conference participants who were going on the Pre-Conference Tour and set off in a coach for Albany on the south coast. We stopped in Katanning, a typical small town in the wheat belt.
It had an old flour mill with the original equipment still in place but not working or suitable for a group visit. We visited Wakes Garage, founded in 1938, but really more the local engineering shop serving all needs, especially agricultural equipment. Two brothers had owned it and worked there. Its condition was exactly as they had left it in 1998. It was the most extreme case of an informal, family business and in a state which was not suitable for visits by others than enthusiasts like us. It clearly is an important site of local heritage and, very likely representative of many other localities. It was very difficult to see how it could become a viable heritage site. We also visited the former printing works of the local newspaper (every town had at least one). Here were linotype and offset lithographic machines just as they had been left. The enthusiastic guide had worked there as a journalist but had none of the technical skills to operate any of the machinery. This could be made into a heritage site of more than local importance if money were spent and there were skilled people to staff it.

Albany has a fine harbour, where we first visited the 1890s fort. The British government had realised that the port should be defended, but it was not clear who were the potential attackers or how three 6-inch guns in fortified emplacements would deter a battle-fleet of the period. We also learnt about the harbour’s role in WWII as an USN submarine base. Nearby was a whaling station which operated in 1952-78 and has been converted into Whale World, a heritage interpretive centre, making imaginative use of the old oil tanks as audiovisual theatres and showing original machinery such as the grisly head saw, the ‘whale cookers’ and oil processing equipment, and, on land, the last whaling chaser which had operated from there. It was claimed that whaling had been Australia’s first industry!

This was followed by a visit to a winery for lunch, plus a quick tasting or look at the wine making. That was a very clean chemical engineering operation. Our next stop was at the ‘Valley of the Giants’ elevated walkway through the forest of 50 to 75m high Red Tingle (Eucalyptus jacksonii) trees which exist only in this area of Western Australia with its 1200mm annual rainfall. The 600m walkway ranges from 9 to 40m above ground and has an interesting combination of rigidity and flexibility. The trees were remarkable and could be viewed both from up on the walkway and from a carefully marked footpath. The site was managed by Conservation and Land Management, a federal government agency.

That evening we were in the small town of Manjimup and, during an evening stroll, we saw a remarkable set of two large diameter wheels on stub axles and joined by a simple frame with a towing shaft. It presented quite a puzzle but a photograph in the window of the neighbouring Information Office showed that it was used to drag huge logs out of the forests. Later we saw more of these ‘whims’ which could be drawn by horses, bullocks or a tractor and had been in common use in the timber industry.
The following day we continued on to Donnelly Mill. Built in 1949 this sawmill had belonged to a family business and had become obsolete and uneconomic to operate. It closed in 1978. It had been an ‘in-forest’ mill complete with its ‘township’ for the workers and their families. The township has survived and provides 36 holiday lets in the houses with a general store and social activities in the communal buildings. The mill building is very derelict and unsafe to enter. The equipment is still in place but in poor condition. It was steam driven by a 1922 engine built by Robey of Lincoln. An unusual feature is that the line shaft for the belt drives to the machines is under the floor rather than overhead, enabled by the sloping site. With its township it forms a complete Industrial Landscape, yet the mill building itself is close to collapse and nobody with authority is prepared to ensure its survival as an important heritage site; a sad state of affairs. At the Conference we learnt that it is the only such in-forest sawmill/township surviving in Australia! Surely it deserves a better fate.

Our next stop was Busselton on the coast. It had a remarkably long wooden pier, the future of which is a bit uncertain. After lunch we went further up the coast to Bunbury, the third largest town in Western Australia, where the old harbour had a short but wide timber pier. It is in a bad condition. It was steam driven by a 1922 engine. Its lineshaft for the belt drives to the machines is under the floor rather than overhead, enabled by the sloping site. With its township it forms a complete Industrial Landscape, yet the mill building itself is close to collapse and nobody with authority is prepared to ensure its survival as an important heritage site; a sad state of affairs.

Outside Bunbury is a remarkable privately-run Heritage Park at Dardanup. It was created by the owner of a major trucking company and the emphasis of his collection is internal combustion engine haulage and agricultural machinery, with some stationary engines, a steam sawmill, a monstrous Euclid bulldozer and much more. The sawmill had been set up to work and provide building material for the site. A related ‘township’ has been created to try to show the complete ‘industrial landscape’. It was a worthy attempt but looked very artificial after seeing the Donnelly Mill. The collection of agricultural equipment is comprehensive and illustrates the scale of the export market which Australia offered the manufacturers of the USA and UK.

We returned to Perth and the 14th National Engineering Heritage Conference which was held in the Trinity Conference Centre of the University of Western Australia. Hosted by the Western Australia branch of Engineers Australia, it had the normal professional conference structure. There were sessions on Heritage Practice for Engineers; Heritage Structures; Conservation of Large Timber Structures; Industrial Heritage of Australian Hardwood Industry; Heritage Infrastructure; Development of Wireless Communication in Australia; Heritage Skills; The Engineering of Heritage Resources Development in Australia; The Engineering Heritage of the Water Supply. Each Session had three papers and a discussion. There was also a visit to the Western Australian Maritime Museum’s two sites in Fremantle coupled with a pair of public lectures.

The opening address was given by the Lieutenant General John Sanderson who had been commander of the UN peace keeping force in Cambodia. His main plea was for those with Heritage concerns not to overlook the heritage Australia has from the Aboriginal people, especially their methods of survival.

From our group Robert McWilliam gave a paper entitled ‘History in Civil & Structural Engineering is More Than the Conservation of Heritage: A UK Perspective on Promoting Historical Knowledge’ and Richard Hartree gave one of the public lectures ‘John Penn & Sons 1799-1911, Makers of the Xantho Engine’. This engine is the only remaining Penn trunk engine. It has two cylinders of 21in bore x 12in stroke and is of the type Penn made for many Crimean War gunboats; after the gunboats were scrapped, several of their engines were used in other vessels. Xantho came from the Clyde in 1872 and was wrecked off the coast at Port Gregory in 1879 where the engine lay for over one hundred years. It was recovered, has been beautifully restored and is on display in the Shipwreck Galleries of the Maritime Museum.

The Conference showed a widespread interest in many aspects of Engineering Heritage with civil engineering works attracting more interest than industrial activities. The attitudes of federal and state governmental bodies varied from very concerned about their own heritage (Tasmania Hydro) to totally unconcerned with any such heritage (Western Australian Tourism). Protective regulations are in their infancy. There are few people with the skills applicable to Engineering Heritage which limits the number of projects which can be attempted. The Association of Engineers has Heritage Panels and is pushing for heritage to be given higher priority in government and corporate planning. There were points of both similarity and difference to the situations we have in the UK.

Our trip took us to a great many points of interest, gave us a fairly comprehensive tour of Western Australia and was very enjoyable. We are very grateful to the organisers and guides. I must thank Frederick Barker and Alan Purdy and Barry Hood for helping me with facts and text and Barry Hood for the photographs used in my report.
Forty years on: a new life for St Pancras

It is 40 years since the new Euston Station was opened by the Queen. Despite anguished protest Philip Hardwick’s celebrated Doric Arch - gateway to the world’s first long distance intercity railway - had been demolished to make way for it. And, a few hundred yards down the Euston Road, the future of St Pancras, the grandest temple of the railway age, hung in the balance. Today, St Pancras is the centrepiece of a remarkable regeneration of railway architecture and travel.

Neil Cossons

Last November the Queen again marked a new chapter in the railway renaissance when she reopened St Pancras as one of the greatest and grandest stations in the world, a spectacular reprise of its former self. Meanwhile, demolition of Euston has just been announced. There are no voices of protest. And, in last October’s issue of Apollo, the arts magazine, is an impassioned plea to make reconstruction of the Arch a condition of replacing the station. In the greater order of things the cost would be insignificant for at Euston development value, rather than the wellbeing of the rail passenger, is the primary motive behind renewal. Not so St Pancras. Here the passenger is king in a palace where trains are centre stage.

How has the wheel turned full circle over those 40 years? What are its wider implications? In signing the Euston Arch’s death sentence Prime Minister Harold Macmillan at one stroke catalysed the disparate forces of conservation into a powerful and coherent voice. The noble Arch commemorated, in the words of the architectural historian Sir John Summerson, ‘as no other structure in the world the moment of supreme optimism in the marriage of steam and progress.’ Its loss was to become the symbolic sacrifice that presaged a growing recognition that the development mania of the post-war years had not only destroyed much-loved historic buildings but was creating bleak inhuman landscapes, carving into towns and cities with urban motorways in the belief that the car would solve everything and we could be re-shape the nation around it.

By the mid-sixties the public had had enough. The Civic Amenities Act 1967 enabled the creation of Conservation Areas. Almost overnight the word ‘Victorian’ changed from being a pejorative, the descriptive of all that was out of date and unfashionable, to reflect an age when Britain’s wealth and prosperity had brought forth engineering and architecture that was the wonder of the world. There were other influences too; the growth of industrial archaeology, of railway preservation, and, by no means least, the effects of the clean air acts which meant that for the first time the glories of Britain’s urban architectural heritage could be seen. The impact was especially marked in London where as buildings were cleaned the city was transformed from impenetrable black to reveal pink and yellow brick and bright stone, qualities of detail invisible for generations.

But throughout, St Pancras lay under a cloud. The hotel had closed in the mid-thirties and was now squalid offices. And future prospects as a station looked unpromising. The end of an era seemed to be in sight. St Pancras, the epitome of Victorian Gothic and with its great iron train shed, the largest in the world when it was built, was the ultimate bravura statement of the railway age, bigger and better than all that had gone before. This was no accident. It showed that the wealth of the Midlands had come to town and the Midland Railway was determined to let everyone know.

The Midland’s expansion under James Allport’s guiding hand had been relentless. From provincial roots in the 1830s it had struck out south, breaking free first from the London & North Western’s grip on its traffic beyond Rugby, then from the Great Northern’s south of Hitchin. And to underscore its territorial ambitions the Midland put a new and unprecedented quality and style into railway travel; abolition of second class and the upgrading of third, cushions on all
seats, Britain’s first Pullman cars, and the finest railway carriages in the country: Thomas Clayton’s 12-wheelers.

With St Pancras open, the Midland pushed north via Settle to Carlisle. If it was St George for England, it was to be St Pancras for Scotland. Through joint lines and committees it reached Bournemouth and the Norfolk Coast, Liverpool and South Wales. But it never lost its roots; Derby was always the ancestral home, St Pancras its larger than life stake in the nation’s capital.

A century later, with railways out of fashion and off the government’s agenda, when lines were closing and traffic in decline, it was difficult to see a future for the grimy white elephant on the Euston Road. St Pancras might have to go. But there were voices of dissent. As early as 1952 Nikolaus Pevsner was expressing admiration for Scott’s Gothic hotel, although Summersoon could not bring himself to support such a radical proposition. And there was John Betjeman. Back in 1932, for one of his first BBC wireless talks, Betjeman had enthused about St Pancras but had been made to remove this eulogy from the script, by a producer perplexed at the crazy notion. On Sunday 10 March 1940, at a time when the nation had a few other things on its mind, Betjeman invited Home Service listeners to imagine themselves in a railway station waiting room on a Sunday 10 March 1940, at a time when the nation had a few other things on its mind, Betjeman invited Home Service listeners to imagine themselves in a railway station waiting room on a wet evening and went on to extol the virtues of the railway age.

Consort of the Barlow trainshed and of Gilbert Scott’s hotel had always been known to be a daunting prospect, to marry the conservation imperatives of Grade I Listing with the expectations of twenty-first century travellers, to reconcile the voices of the past with our aspirations for tomorrow. Crucial has been the relationship between the partners charged with getting the job done. From the outset, London & Continental, as client, their architect Alastair Lansley (who had already cut his teeth with Nick Derbyshire at Liverpool Street) and English Heritage shared a common vision. They recognised that the extraordinary qualities of St Pancras as a great historic building represented an incomparable asset and that like all assets it needed to be nurtured. The quality of renovation and of the new interventions, in terms of design, materials and workmanship had to be of the best, otherwise it would deny the spirit of St Pancras. They knew too that only radical solutions would win the day.

For English Heritage it meant a level of engagement, day-by-day, in what has proved to be the largest and most expensive building conservation project in which it has ever been involved. Under the terms of the rail link Act the need for Listed Building Consent was removed in favour of a tight programme based on partnership agreements, disputes to be referred to the Secretary of State. It is a tribute to the strength and determination of the partners that not one of the deadlines for decision was missed nor was the appeal process ever invoked. Rob Holden, Chief Executive of LCR, saw the rebirth of St Pancras as Europe’s destination railway station representing a remarkable achievement that ‘demonstrates the power of working in partnership.’

The formula is elegant in its simplicity, the execution formidable in its complexity, the marriage of old and new exceptional in its outcome. Because the Midland crossed over the Regent’s Canal it arrived on Euston Road at a high level affording a huge volume of space beneath the train deck. This is the undercroft, which as we all know was used for the storage of Burton-on-Trent beer in barrels. Indeed, the module for Barlow’s train shed derives from the length of a beer barrel. Here was space for all the ticketing, check-in, security and public facilities that a modern international terminus needs. Linking the undercroft with the trains above required an architectural re- ordering of the station’s internal geography. It has been the making of the new station. Passengers move gently upwards through great slots punched through from rail level. As they emerge the breathtaking splendour of Barlow’s roof, haloed in the pale blue of its original colour scheme, spreads out above. St Pancras is everything that New York’s Grand Central is not, for here you see in their true element the trains - sleek and glossy and centre stage.

St Pancras is set to revolutionise our view not just of the railway but of great historic buildings in general. The metaphor for the Euston of 1967 was the airport terminal; today that is seen as its main failing. But St Pancras trades on older and more gracious values. It brings back grand style to rail travel in a manner unequalled anywhere. It demonstrates too that historic railway buildings not only lend themselves to revitalisation but that they can animate the experience of rail travel with a reordering and distinctiveness impossible to achieve by other means. And, paradoxically, that with the weight of history behind them and with impeccable standards of modern design they can endow that experience with a unique quality of contemporaneity.

In the station concourse Paul Day’s sculpture ‘The Meeting Place’ strikes a jarring note of giant-sized kitsch. But St Pancras is big enough to overcome this lapse of taste. Above, the great clock, a replica of the original, looks down on Europe’s longest champagne bar. Looking back is the bronze of Sir John Betjeman by Martin Jennings. There is more than a hint of satisfaction on his face.

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

Your Council has been very busy lately with a number of important developments, and I thought it was better to let all members know about these now rather than leave it until the AGM in August.

We apologise that there has been no Ironbridge Weekend this year. This was partly the result of the handover of the position of Affiliated Societies Liaison Officer from Ray Riley to Christine Ball. In the last issue of IA News, Christine did ask for ideas as to the format that these weekends should take. We certainly hope that we can organise one in 2009, so please do get in touch with Christine and let her know what you would like!

The other reason for not holding it was because of the organisation of the joint conference organised between AIA, the Society for Post-Medieval Archaeology and the Irish Post-Medieval Archaeology Group in Leicester in April. There is only so much organisation volunteers can do! This conference was designed as a follow-up to the conference in Nottingham which gave rise to Understanding the Workplace: a Research Framework for Industrial Archaeology in Britain which was published as Industrial Archaeology Review Vol. XXVII No.1, May 2005. It is also intended to act as a forum for the kinds of discussion which have enlivened the pages of IA News and Industrial Archaeology Review in recent months on the comparative importance of technology and society in industrial archaeology. We have several interesting speakers coming from the USA including Professor Patrick Martin who is the Executive Secretary of the Society for Industrial Archeology and Editor of its journal, IA, The Journal of the Society for Industrial Archeology. The delegates already include representatives from several European countries including Ireland, Denmark and Rumania. There will be a report of this meeting in IA News and the papers will probably be published as a monograph of the Society for Post-Medieval Archaeology with a special discount for AIA members. The Conference will also see the launch of a new Centre for Historical Archaeology at the University of Leicester, which includes both post-medieval and industrial archaeology.

In June 2009, AIA has been invited to join with various other societies in a conference hosted by the Ironbridge Gorge Museum Trust to commemorate 300 years of coke smelting of iron and 50 years since the restoration of the old furnace in Coalbrookdale. This will take place from 3 to 7 June 2009, and keynote speakers include Michael Darby, Sir Neil Cossons and Marilyn Palmer. In 2012 AIA will again join with The Newcomen Society in Dartmouth to celebrate 300 years of the Newcomen engine. All these conferences are part of Council’s objective of working in partnership with others on strategy and policy relating to our interests.

Sir Neil Cossons, one of our Vice-Presidents, is fronting a new organisation Save the Industrial Revolution (STIR), designed to promote the interests of small voluntary preservation groups who restore and care for industrial sites such as the Wortley Top Forge and Crofton Pumping Station. Their second meeting was at Macclesfield Silk Museum on 10 April and I have sent on behalf of AIA a letter to Sir Neil detailing how the AIA could help such groups by organising Ironbridge Weekends on topics they might suggest, such as the completion of grant application forms, health and safety issues etc as well as the opportunity to publicise their activities though IA News and to take part on our Award schemes. Two members of AIA Council attended this meeting to understand better the needs of STIR members and how AIA might be able to help further. A report will appear in IA News.

I am retiring from full-time teaching at the University of Leicester on 30 April this year although I retain the title of Emeritus Professor of Industrial Archaeology and have a two year Leverhulme Emeritus Fellowship to pursue my interests in the social impact of technological innovations on country house estates (thanks to AIA members who have already drawn my attention to potential sites of interest and I would be grateful for any others!). As a result, and because of increasing pressure on space at Leicester, we have to vacate the Leicester AIA office by 15 August 2008. James Gardiner is currently completing an MA in English Literature at the University of Leicester and is going on to do a PGCE afterwards, so will be resigning from that date. We are very grateful to him for all the work he has done in sorting out the membership database, Gift Aid, Direct Debits and so on. We have been fortunate in having office space without paying overheads for the last ten years at Leicester, but Universities are now much more financially conscious and such arrangements are sadly no longer going to be possible.

We have received several offers, including one from David de Haan at Ironbridge about the possibility of hosting the office there. This would be ideal as that is already our registered address with Companies House and Council has always been keen to strengthen our links with Ironbridge. We have a meeting about this in April and Council will consider the options at its June meeting. I will report on further developments in the next IA News as well as at the AGM. But please do watch this space so that you are aware when communications can no longer be received at Leicester.

You will all be aware that Maney has been publishing Industrial Archaeology Review since Peter Neaverson and I took it there after our spell with AB printers in Leicester. Maney Publishing has the largest single publisher’s list of archaeological journals and there is no doubt that Maney has done an excellent job with the journal and greatly increased its circulation both at home and overseas.

Members may already know that some issues of the journal have been available electronically through IngentaConnect (www.ingentaconnect.com/content/maney). We have come to an agreement with Maney to ‘retrodigitise’ (a new word!) all the back numbers of Industrial Archaeology Review and make these available free of charge to AIA individual members (non-members will be able to view abstracts but will pay per view for articles). We hope that this will be of value to members and will also make the journal more widely available through electronic databases such as JSTOR, which is heavily used by University students these days. Maney will also make the journal available to institutions through their MORE (Maney Online Research E-journals) Archaeology and Heritage Collection in 2008. This E-journal collection will allow university and college archaeology departments, consultancies, architecture practices, heritage workers, and archaeological societies to access journal content online that is highly specific to their subject area. It already includes ten high-profile archaeology...
Council has appointed a Steering Group, to build on the existing expertise of our Endangered Sites Officer, Mike Nevell. Mike Nevell, who is already our Endangered Sites Officer, will host the grant meetings. Mike Bone and Mark Sissons, our new Publicity Officer, are working hard to take our plans for historic environment to be more aware of the problems and potential of industrial buildings and structures. In conjunction with the Council for British Archaeology, who were the first national organisation to recognise industrial archaeology back in the 1950s, we successfully applied for a grant from the English Heritage National Capacity Building Programme and have been awarded £8000 for the year 2008-9. The purpose of this grant is to enable us to organise training days in the recognition of industrial buildings for CBA regional correspondents, local planning officers who deal with listed building applications, CBA regional groups, members of fellow Amenity Societies and so on. The grant will enable us to employ a part-time Historic Buildings Officer to organise these training days but since the grant is to enable volunteers to contribute more effectively towards the conservation, understanding and enjoyment of the historic environment, the training will be run by AIA members. Mike Nevell, who is already our Endangered Sites Officer, will host the Historic Buildings Officer in his office in Manchester. Council has appointed a Steering Group, to include Mike Nevell, Marilyn Palmer, Tony Crosby, Mike Bone and Mark Sissons, our new Publicity Officer, to take the grant forward. We shall be working with Lynne Walker, the Historic Buildings Officer of the CBA, who has been very helpful in advising on the grant application and who has offered to help with the training days.

In the year 2008-9, we hope to organise a pilot training day in Manchester in October for the north of England and one in Bristol early in 2009 for the south of England, followed by regional training days to cover the nine English Heritage regions. We shall need to apply for further funding to enable us to complete the regional programme in 2009-11. The training days will consist of illustrated lectures on types of industrial buildings in their context, i.e. the water courses, transport infrastructure etc needed to enable them to function; sessions on the particular problems of such buildings, including scale, fabric etc; and practical work in the field, together with the provision of illustrated handouts on building types together with brief bibliographies. We shall ask members of AIA to help run these training days. More details will be given in IA News as well as in flyers as soon as further details become available.

In the past year! I am very grateful to all Council members for the hard work they have put in, and it is perhaps invidious to select individuals. However, with various developments discussed above, our Treasurer Bruce Hedge has had a great deal of additional work to do, and Richard Hartree has put a lot of effort into the Maney agreement as well. Tony Crosby and Mike Nevell helped me get the English Heritage grant application in on time and, together with Mark Sissons, are working hard to take our plans for the grant forwards.

Michael Messenger, as well as acting as the Booking Secretary to the Annual Conference, has continued to improve the AIA website – please do look at it and send him any comments about what you would like to see on it.

Finally, I am very sorry that we missed the occasion to celebrate the 50th issue of IA News edited by Peter Stanier (I think that this issue is his 54th!). This is a fantastic achievement and IA News has gone from strength to strength under his Editorship. I am also pleased to say that David Gwyn has agreed to do another three years as Editor of Industrial Archaeology Review. I stand down as Chairman at the AGM in August this year, and although the last three years have been hard work with so many new developments, I could not have worked with a better team on AIA Council. Council has recommended that Tony Crosby, the current Vice-Chairman, takes over from me in August and I am sure that all members will wish him well in the position.

Marilyn Palmer, AIA Chairman
Ill-fated British industrial heritage in Andalusia

One of the most important Scottish industrial railways, 4 ft gauge (1,220 mm) like the Glasgow Subway, is perhaps that of the Tharsis Copper & Sulphur Co. Ltd between Tharsis and the Rio Odiel in Huelva, Spain. It was built in 1871 to give service to the mines of the Glasgow head-quartered company and created ex professo in 1866 to exploit the mines of Tharsis, on the Iberian pyrite strip. Until then, the mineral was carried by mules to the port of Huelva, for which reason the production could never have been competitive.

The “Y” shaped mining railway line was 29.21 miles (47 km) from Tharsis to Corrales and was in service for 128 years until 1999; the La Zarza branch was closed in 1990. Its magnificent pier on the Rio Odiel in front of Huelva was built by Sir William Arrol & Co. of Glasgow. Another, older one was dismantled in the 1970s. The mines of Tharsis and La Zarza are situated in the region of El Andévalo, some 30 miles west of those of Rio Tinto, exploited by the eponymous company created in 1873, another icon of British industrialism in the southern Iberian Peninsula.

A control stake of the Tharsis Copper & Sulphur, Co. Ltd was sold to Spanish interests in 1970, being created the Compañía Española de Azufre y Cobre de Tharsis, S.A. that, after being merged with the Société Française des Pyrites de Huelva, would become Compañía Española de Minas de Tharsis, S.A., listed in the Madrid stock exchange and controlled for years by Banco Santander.

In the mid-1990s, as a result of the collapse of prices in the international markets, the mining of copper in the province of Huelva disappeared. This was also due to the substitution of pure sulphur for the pyrite mineral, something unexpected 125 years before when sulphur was not a by-product of oil refineries nor found in a pure state in the then geologically-known and worked world. In the later years, both in Tharsis and Rio Tinto, the employees took over the companies for a symbolic price and tried to exploit them under the form of a S.A.I. (‘Workers Limited Company’ in Spanish). In 1999 the contract to supply pyrites to the fertilizer producer Fertiberia on the opposite bank of the Odiel expired with no possibility of extension, leading directly to the closing of the mine and the railway.

Eight years later, the situation of the railway is all but one of neglect and abandonment. Even though in the early years after closure there was some public debate in the Diputación Provincial of Huelva (the county council) about the possible outcomes for the railway, it soon became apparent that the political establishment was only interested in using the issue as a political weapon against the opposition party. Nor did they have much idea about the feasible outcomes. In 2002 the President of the Diputación wrote a letter in reply to the offer made by the receiver in Madrid (the company was and still is in bankruptcy) telling him the government body ‘was not interested in acquiring neither a part nor the whole railway’. That eventually would be a point of no return for the county council; it seemed they could not backtrack, particularly with regard to those that proposed the creation of a ‘British [heritage] route’ in the province.

Five years on now, parts of the railway branch La Zarza to El Empalme and the last stretch in Corrales and the industrial facilities in La Zarza and Corrales have been dismantled for scrap.

As there have been voices raised during these years against the dismantling, neglect and abandonment of this magnificent industrial heritage, the authorities of Tharsis expressed its will to acquire the railway to restore and reuse it for tourism. The mayor told me this in July 2006 and said the target was October of that year. Nothing happened but in January 2007 I was told by the receiver that the acquisition was a fact and only some formalities remained (the public document and register). The amount agreed would have been about €300,000 (£209,541).

Recently, according to sources close to the receiver, the purchase would have been completed on 7 November, 2007 at the public notary of Valverde del Camino. The buyers being the Tharsis town council for the main line from Tharsis to the Rio Odiel and a local entrepreneur for the La Zarza to El Empalme branch. However, nothing has been officially informed or reported by the media.

If the purchase has taken one year to be completed we could not perhaps be too optimistic about the line’s future, its eventual restoration and re-adaptation as a heritage railway. The more time passes, the more difficult it will be to save it, as the elements, vandalism and looting are progressively destroying this magnificent work of Victorian engineering, the epitome of the Industrial Revolution of Scottish mould in western Andalusia.

So far, neither the Andalusian Government (the incumbent on heritage matters) nor the Spanish one have done anything or have any plan, as far as I know, to avoid the loss of this important legacy of British industrial heritage.

Perhaps the time has arrived also in the United Kingdom to help to save the British industrial heritage abroad. A new act for cultural heritage passed in the Andalusian Parliament on 14-15 November, 2007 is advanced and high minded in its preface and provisions, considering explicitly for the first time the industrial heritage as such. However, it is still to be seen whether the facts on the ground are going to change.

Manuel Muriel
World Heritage Science and Technology Expert Workshop

This meeting held in London on 21-23 January 2008 is potentially of great importance for the development of our subject. It was in many ways a successor to the 1994 Canal Experts Meeting in Canada which resulted in the incorporation of the term ‘technical importance’ into the World Heritage Criteria. It was also a launch of the Global Strategy in which the international industrial archaeology organisation (TICCIH) has worked with the World Heritage Office of the International Council on Monuments and Sites (ICOMOS) to produce a series of well received World Heritage Studies on Canals, Bridges, Workers’ Settlement and Coalmines which are all accessible on-line (www.icoms.org/studies).

The recent London meeting took place in response to a request from the World Heritage Committee in 2007 for a workshop on how to inscribe World Heritage Sites of Scientific Interest. This was partly in response to issues arising from the nomination of Charles Darwin’s response to issues arising from the World Heritage Committee in Scientific Interest. This was partly in response to issues arising from the World Heritage Committee in June 2008.

Among the recommendations being made to the World Heritage Committee is that extra finance is made available to the advisory bodies to produce a framework document identifying sites related to the major advances in science and technology. The need for further detailed studies in technology and science is to be investigated and proceeded with. There is also likely to be a review programme of the many sites already on the World Heritage List that have a substantial significance in terms of science and technology to see if there is a simple procedure to recognise this importance, possibly with additional criteria added to their inscription.

The potential use of Criteria 6 for inscription on the World Heritage List will also be re-examined to see how sites associated with the significant discoveries of great engineers be inscribed on the List. However, such inscriptions will need to relate to the locations and building that inspired such innovation, or where such discoveries took place, rather than simply birth- or dwelling-places.

This produces a major opportunity for the industrial archaeology community, through TICCIH, to participate in this revitalised process. The contextual studies for the World Heritage List begun with that for Canals etc need to be completed. A good start has been made but studies started, for example, on textile mills, the paper industry and non-ferrous mines need to be completed so that they can be part of the renewed World Heritage process. At the experts’ meeting there was substantial comment that the World Heritage List should be finite and that a small number of sites from each area of significance interms of science and technology to see if there isa simple renewed initiative to produce an adequate representation of science and technology on the World Heritage List.

There is little doubt that the clear recommendations produced by this recent expensive meeting of experts from across the world will be acted upon, both at and after the forthcoming World Heritage Committee at Quebec in June 2008. In the meantime there needs to be discussion on how the international industrial archaeology community and TICCIH can participate in this renewed initiative to produce an adequate representation of science and technology on the World Heritage List.

Stephen Hughes

Hawley Collection finds a home at Kelham Island

The story of the edge tool and cutlery manufacturing industries that helped make Sheffield world famous will soon be re-told, thanks to a Heritage Lottery Fund (HLF) award of £595,000 which Sheffield Industrial Museums Trust (SIMT) will use to unite the internationally important Hawley collection of hand tools with Kelham Island Museum.

Located in one of the city’s oldest industrial districts, the museum brings history to life for visitors as they witness the sights and sounds of the City’s industry. Derelict buildings at the site will be renovated and become home to the intriguing tools. The site, as part of the former Russell Works where Wheatman & Smith manufactured saws and other tools, is a natural home for the collection. It will be the first time that the Hawley Collection will have a gallery dedicated to showing its full scale and scope. The collection is owned by the Ken Hawley Collection Trust and is currently housed at Sheffield University where access is limited, although there have been successful temporary exhibitions in the past.

Assembled over a working lifetime by Sheffield tool merchant, Ken Hawley, the collection encapsulates the core trades in Sheffield that Ken realised had begun to disappear and needed to be recorded before it was too late. The huge range of artefacts offers an intriguing window into the past as it reflects the story of the tool, cutlery and silver trades of Sheffield.

The collection has the tools that made tools such as the special hammer used to make a saw blade flat with 300 strikes at different angles. How do files get their teeth? Hawley provides the answer. The world’s first steel tape measure and the history of the Stanley knife, everyone uses them and it started here. Many countries or regions had their own ‘foot’. Sweden had a 10-inch foot and a 12-inch foot: the same foot but different inches! The collection has rulers of various lengths all a ‘foot’ long. How long did Chinese Pig bristles need to be? A special seven inch rule was made to measure. Billiard balls, gloves, buttons all had different measures and the Hawley has them all. Other items from the collection include archives such as photographs and 3,500 trade catalogues for British and foreign hand tools, cutlery, holloware, surgical instruments and machine tools. Cine footage of the tools in action and an oral history from Ken Hawley will take visitors back in time.

The good news comes in the wake of the disaster last year when the River Don breached its banks during Yorkshire’s worst floods in living memory. Kelham Island Museum was hit hard and it is currently closed whilst exciting plans to re-display the ground floor galleries and implement flood defences are undertaken. HLF then
awarded £50,000 for the ‘Towards the New Kelham’ project to ensure that access was restored through the conservation of the collection, that volunteer help was engaged and to develop new exhibition storylines all as part of the ‘clean-up operation’ after the floods.

Combe Mill

Combe Mill near Long Hanborough in Oxfordshire remains open after it almost closed in 2003 when Blenheim Estates sought permission to develop the site as office accommodation. Planning consent was eventually given to develop the surrounding buildings of the Blenheim Sawmill site at the start of 2007 but only after English Heritage listed the mill itself as Grade II*, the star being added because of the special interest of the interior, fixed, mechanical contents. Our Society has almost completed negotiations with Blenheim Estates for a long lease on the mill and this provides a basis to seek public funding to conserve the building and content and to improve visitor facilities.

We have recently applied to the Heritage Lottery Fund for a Project Planning Grant (PPG) to pay for professional surveys of the structure and fabric of the mill and, importantly, to carry out an in-situ survey of the Cornish boiler that was retired from service in 2005 when severe external corrosion was found. Other sources of external funding are being explored and the Society has doubled the number of in-stream open days this year to attract more visitors. Groups may book to visit the Mill any time via our website.

The stand-by boiler we purchased in 2006 and which Joy Brown described in IA News 139, page 14, has now been re-housed from its temporary position and is providing good service. A pre-used oil burner was donated by Weishaupt and we bought a simple water treatment unit with a grant from West Oxfordshire District Council. However, the increasing cost of fuel oil is now a significant operating cost in contrast to when we were able to burn free scrap wood in the Cornish boiler.

Readers will remember that Combe Mill is both steam- and water-powered and last year we were frustrated when our attempts to re-instate the waterwheel head race came to nothing. We failed to be awarded funds from a Grantscape ‘Windmill and Watermill Challenge’ competition, and a hydrology survey of the river demonstrated that river levels are now such that the original route is no longer viable. We are now working with a consultant to get Environment Agency approval to construct a shorter link to the river and to construct a small weir to create enough head of water to turn the wheel once more.

It would be marvellous if we could show visitors the mill’s machinery, already powered by line shafting from the beam engine, being driven by the waterwheel. Our future plans include building a visitor centre in which to display more of our collection and in which to stage occasional exhibitions. In our attempt to provide good access to information about the Mill and its contents, we have improved our website and updated the Guide Book. For more details about opening times see www.combemill.org.

Tony Simmons
Combe Mill Society

New surveys in Essex

Essex County Council Historic Environment Record (ECCHER) has continued its programme of industrial monument surveys with new surveys in 2007. The Mills project identified 84 extant sites comprising a wide range of mill types, mostly the traditional water-powered country corn mill, but also industrial steam powered flour roller and textile mills, former fulling mills, tide mills and gunpowder incorporation mills. Of the 68 mill sites visited so far 30 (44%) have been converted to residential use, 23 (33%) are in business use, while only 14 (20%) remain in an unconverted or non-residential state. Each mill tells its own story and as such many factors influence the survival of mill gearing although it is clear that post-war residential and business use conversions have been the main perpetrator behind the loss of this technology. From the 68 sites only 10 retain a waterwheel/turbine and significant levels of the stone drive and/or mill stones, seven watermills could be classed as almost complete while a lowly five have the potential to return to or are in a working condition. One mill site, although burnt down in 1879, still preserves its engine house, stone drive and a complete compound double acting beam engine of 1845 by J.A.S. Wentworth & Son Engineers. It will soon become the subject of a major restoration and will join two other watermills and a number of windmills currently under repair or fully restored by the Essex County Council Mills Team.

Following on from earlier surveys of the redundant railways between Braintree and Great Dunmow (The Fitch Way) and the redundant Saffron Walden Branch between Audley End Station and Bartlow Junction, the ECCHER,

Local MP David Cameron learns first-hand about IA as Mike Hallam explains the Cornish boiler at Combe Mill in January 2008
Photo: Barry Clack

Pamdon Mill near Harlow, a late nineteenth century mill with a turbine
Photo: Essex County Council Historic Environment Record
working with local enthusiasts, is presently undertaking three more surveys of redundant and active railway lines across the county. Presently being surveyed are the railways of the Blackwater and Crouch Estuaries including the redundant branch lines between Witham and Maldon East, Maldon East to Woodham Ferrers and the active line between Shenfield and Southminster. In the north of the county the survey of the redundant Colne Valley line to Halstead, the Stour Valley branch and the section of the redundant line from Witham to Braintree is underway, and in the west of the county fieldwork has commenced on the active London to Cambridge main line and the parts of the London Central line that fall within Essex. This line was, of course, previously a GER branch, and many buildings survive.

David Alderton

Rare mining equipment restored in Cornwall

Volunteers at the King Edward Mine Museum near Camborne have completed the restoration of a unique and historic piece of mining equipment. The Frue Vanner is believed to be the only survivor in the world.

Invented in the 1870s by Ulsterman, William Bell Frue, when working in the Michigan copper mines, the vanner was a successful attempt to mechanise the process of separating ore particles from the generally lighter waste material after the ore was crushed. Pulped ore was fed onto the upper surface of an endless rubber belt. The working surface some 12ft long and 4ft or 6ft wide is turned by rollers and slopes gently upwards to the end where ore is fed. Eccentric cranks also give a lateral shaking motion. The ore pulp runs under a gentle water spray and the metal particles, tin in this case, are heavy enough to be carried over the top roller into a trough. The lighter waste is washed down the belt against the direction of travel and discharged at the bottom end.

The first Frue Vanners in Cornwall were installed at Dolcoath Mine in 1898 and were soon in widespread use. The remains of large vanner houses survive at the neighbouring Grenville United and Basset mines. A few were employed at South Crofty and Geevor mines as late as the 1960s. The King Edward example, built by British licencees Fraser & Chalmers, has taken the museum team 12 years to restore.

The Frue Vanner now joins King Edward’s unique and fully operational collection of ore processing equipment. This includes a Californian stamps unique in Europe, one of only two round frames in Cornwall, and the only known rag frames. Nowhere else can such a range of processes be demonstrated. King Edward Mine held its Open Day on 27 April 2008. The museum will be open from May to September. See www.kingedwardmine.co.uk for details.

Graham Thorne

Salt works success

The Heritage Lottery Fund announced on 13 March that the Stage 2 bid for the restoration of the Lion Salt Works had been successful. The £4.96 million HLF award will go towards the total cost of the £7 million project. A great start to 2008. Cllr John Grimshaw, Lead Councillor for Recreation, Rural and Culture at Vale Royal Borough Council (the accountable and lead body for the project) said: ‘I am delighted this bid has been successful. Many people have committed time, effort and money to this project and it is vital to ensure this important piece of our heritage is saved for future generations.’

The Lion Salt Works in Marston, Northwich, is a group of buildings owned by Vale Royal Borough Council and designated as a Scheduled Ancient Monument by the Department for Culture, Media and Sport as advised by English Heritage. The land and buildings are leased to the Lion Salt Works Trust, which is working to operate the site as a museum of the salt industry. The plight of the Lion Salt Works first came to national attention in 2004 during the second series of the BBC’s Restoration programme which highlights a range of properties they describe as ‘truly extraordinary’, raising awareness of fascinating but endangered buildings. Although the Lion Salt Works didn’t win, its importance to both regional and national heritage was underlined.

During 2008 the Lion Salt Works Trust will continue to develop and improve facilities within the current exhibition space at the former Red Lion Inn, including an exhibition about the development works and links to the wider area. Building contractors will start work on the site in 2009.

Andrew Fielding, Project Director

Totnes pumping house saved

One of the original pumping houses for Brunel’s Atmospheric Railway next to the railway station at Totnes in Devon has been recently listed Grade II and, hopefully, saved from demolition by its owners Dairy Crest who are redeveloping the site of their now-closed dairy. This news comes after the prolonged reluctance of English Heritage to list the building, in the face of a campaign involving local groups, SAVE Britain’s Heritage, the AIA, other groups and individuals. Although less striking than the already-listed pumping stations at Starcross and Torquay, the Totnes building is as much a part of Brunel’s ill-fated railway scheme.

Headstocks threatened

Despite being in a conservation area, a threat of demolition hangs over the remaining headstocks at Annesley Colliery, the oldest working colliery in Nottinghamshire when it closed in 2000. SAVE Britain’s Heritage is calling on groups or individuals to restore and maintain the iconic structure.
Forth Rail Bridge paint lasts longer
The well-known never ending occupation of painting the Forth Rail Bridge is soon to change. A new paint, similar to one used in the North Sea oil industry, now being applied has an estimated life of at least 25 years and perhaps a decade or so longer after completion of the current massive job in 2012. Unsightly scaffolding will cease to break up the outline of this famous bridge.

Catch Me Who Can
The 4th International Early Railways Conference is being held on 12-15 June 2008 and has been arranged to commemorate the 200th anniversary of the first steam locomotive for passengers, Trevithick’s ‘Catch Me Who Can’. The Conference is at University College, London, which lies alongside the site of the locomotive’s demonstration.

The public lecture, given by John Liffen of the Science Museum, is on the subject of this pioneering engine and promises both the exposure of an iconic railway image as a fake and the unveiling of a newly-discovered picture that may take its place. There will be an exhibition of items connected with Richard Trevithick, including his two early models which have not been seen together for 75 years.

A significant feature of the Conference will be proposals for a research agenda for early railways, which may influence future directions for research and suggest site types for archaeological investigation, together with discussion on a possible national database of rail types. The conference papers include a very important presentation on the excavation of an ‘Elizabethan railway’ of the later sixteenth century, potentially pushing back our knowledge of railways in Britain by 30 years and introducing a new type of waggonway.

Further details can be obtained from: www.early.railwayhistory.me.uk or by writing to: ER4, 7 Onslow Road, Richmond, Surrey TW10 6QH.

Changing landscapes of coal
The National Coal Mining Museum for England at Wakefield hosted a new exhibition, Changing Landscapes, between February and May this year. Changing Landscapes focuses on the physical and social changes that have taken place at colliery sites and in mining villages since the closure programme. The exhibition provides a visual, two phase case study of pits from around six English regions, looking at the working mine and the current landscape. Designed as a working model, the Museum hopes that other communities will be inspired to add to the exhibition in the same way as it tours to other venues from June 2008.

Readers are reminded that there are many other free attractions to enjoy at the National Coal Mining Museum for England. For details see www.mcm.org.uk.

A frieze in time
When Tootal Broadhurst Lee’s Sunnyside Mills in Bolton closed in 1980 and were demolished two years later, a carved stone frieze which adorned No.4 mill engine house was rescued by Bolton Museum and put into storage. In 1991 the frieze was re-sited on the wall of the town’s Market Place extension, where it remains today.

The frieze, carved by J. Bonehill & Co. under the supervision of the architect G.T. Woodhouse when the mills were built in 1862-67, depicts all stages of cotton manufacture from picking the raw material through to spinning and weaving. The image shows three sections of the frieze which originally comprised eight such carvings arranged in rows.

Bill Jones

Sheffield sheep shears
The smallest union affiliated to the TUC, the Sheffield Sheep Shear Workers with ten members, was disbanded last summer. Founded in 1890, it was based latterly at Burgon & Ball’s La Plata Works at Malin Bridge, Sheffield, where hand sheep shears are still made. Today they are used, for example, for dagging sheep (trimming the rough wool on their rears), edging lawns, and topiary.
Home Counties

Aircraft move rapidly, so it was perhaps not surprising when a de Havilland 'Venom' jet fighter, dating from the 1950s, suddenly appeared mounted high on a curved tubular steel mounting by the roadside on the edge of the former Grove Airfield, just north of Wantage (Oxon) in October 2007. Laid out during 1941, Grove Airfield was involved with Bomber Command, the training of glider pilots, and use by USAF during World War Two. The Chairman of the commercial company developing the Grove airfield site, Robert Lamplough, is a keen aircraft enthusiast, and it is his DH 'Venom' that now dominates the local skies. At the World War Two intelligence centre at Bletchley Park (Bucks), the Duke of Kent switched on the reconstructed 'bombe' on 17 July 2007. The bombe was an electromechanical device developed by the 'mathematical genius' Alan Turing to decode messages transmitted by the German 'Enigma' machines. The first bombe, known as 'Agnes', was operational in 1940 and by 1943 there were more than 200 operating in different places. The bombs were made by British Tabulating Machines (later ICL) at Letchworth (Herts).

Turning to railway structures, staff and children at the Old Station Nursery, Faringdon (Oxon) were glad to move back into the former Faringdon Branch terminus building after damage by the July 2007 floods. Investigations at the planned site of a Velodrome at Wolverton (Bucks) have revealed indications of earlier railway structures (including a bridge and pumping station) linked to the London & North Western Railway. The retaining wall of the Royal Train Shed (built in 1889 on the site of a former lifting shop) has also been studied. Small railway goods sheds are rare along the West Coast Main Line south of Rugby. One at Berkhamsted (Herts), much altered internally and extended, is still used by a builders' merchant. One of a pair at King's Langley (Herts) recently lost its roof in a fire and its future must be uncertain. In Biggleswade (Beds) former stables and a weighbridge house at the railway station, both in a Conservation Area, have been controversially demolished. Small weighbridges were once commonplace in station goods yards and they do not seem to have attracted much attention from industrial archaeologists, though they were an important feature of commerce.

A railway preservation site where a weighbridge has been preserved is the Buckinghamshire Railway Centre at Quainton Road, which is best known nowadays as the current home of the station building of the former London & North Western Railway Oxford (Revley Road), moved there from its original site alongside the Great Western station in Oxford. The Centre has also taken over a former Government buffer store adjacent to the stub-end of the Brill Branch. It now forms an excellent museum. Elsewhere on the preservation scene, the Leighton Buzzard Light Railway (Beds) is still battling against development plans which could see the remaining 'open country' section of its two-foot gauge line engulfed by new housing.

On canals, two major projects are in progress in the region. Following the opening of a new link to the Thames at Abingdon (Oxon), as reported in IA News 147, progress continues with the restoration of the Wilts & Berks Canal, whose 'Berks' section has actually been in Oxon since the boundary changes of 1974. The wharf area of Wantage (Oxon), once home to both a terminal basin for the Wilts & Berks Canal and a goods yard for the steam-powered Wantage Tramway, has now been largely swamped by new (and unsympathetic) housing. The other major regional canal project is the Bedford and Milton Keynes Waterway, which aims to link the Grand Union Canal with the Great Ouse. Work is currently progressing - with high hopes - through the paper planning stage. The Kenet & Avon Canal had a problem when the Sheffield Mill Weir, at the home of the singer Kate Bush at Sulhamstead (Berk's) shipping lock was knocked down and the weir has also been concerned over the dilapidated state of the Bone Mill Sluice at Newbury (Berk's). In both cases the structures are not under the direct control of British Waterways. A new overflow spillway (replacing an earlier, probably post-World War Two, structure) has been installed by British Waterways at the Wilstone Reservoir, from which water is pumped to feed the Tring Summit (Herts) of the Grand Union Canal.

Tringford Pumping Station, a fascinating site where water is lifted from Wilstone Reservoir (and other local canal water reservoirs) into the Tring Summit, was one of the industrial history sites in our region visited by members of the Institution of Civil Engineers’ Panel for Historical Engineering Works (PHEW) during their annual meeting, which was based on Bedford during September 2007. However, sites within our region did not figure in the Historic Bridges & Infrastructure Awards, which the PHEW organises. We did not feature either in the National Railway Heritage Awards, or in the Telford 250th Anniversary Celebrations. However, as reported in New Civil Engineer, March 2008 saw the 50th anniversary of the official starting of work on the M1 motorway from London to Birmingham by Harold Watkinson, the then Transport Minister, on 24 March 1958. The 17-mile St Albans bypass section, supervised by Hertfordshire County Council, included 13 distinctive bridges designed by Sir Owen Williams, many of which are still in use.

On the River Thames, the Environment Agency’s River News reports the completion of a major overhaul of Bray Lock (Berks). Investigations during the fitting of new gates at Osney Lock (Oxford) revealed that all traces of early lock structures appeared to have been lost when the lock chamber was rebuilt using concrete during the 1970s. Nearby at Port Meadow, also by the Thames in Oxford, the remains of an eighteenth-century 'punt' were partially exposed by bank erosion. Investigation by a team led by Brian Durham, the Oxford City Archaeologist, revealed what appeared to be a long, shallow open boat, some 20 metres long (so the Oxford Star reported), apparently manoeuvred by two men with punt ing poles, each end. After investigation, the remains have been safely re-interred in the river bank.

On non-transport watery matters, development plans for Dandridge’s Mill on the Letcombe Brook at East Hanney, north of Wantage (Oxon), include ‘the installation of a turbine for

A de Havilland DH 112 ‘Venom’ fighter, built in 1957 for the Swiss Air Force, recently displayed beside the former WWII Grove Airfield, near Wantage, Oxfordshire

Photo: Henry Gunston

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electricity production’. Discoveries in the grounds of West Wycombe Park (Bucks) include remains of a functional (as opposed to decorative) water feature - possibly linked to fishing, or a mill leat - which appears to date back to the early eighteenth century occupation of the estate by Sir Francis Dashwood, an ancestor of the Sir Francis of ‘Hell Fire Club’ fame. A separate report elsewhere in this issue of IA News provides the latest news from Combe Mill (Oxon). Thanks for inputs from Bob Carr, Bruce Hedges, Colin Moss, and news publications of the Kennet & Avon Canal, the Newcomen Society, the ICE Panel for Historical Engineering Works, and the South Midlands Group of the Council for British Archaeology (in addition to those publications already mentioned in the text).

Henry Gunston & Tim Smith

East Midlands

News from Northamptonshire includes the following case which shows the importance of keeping a constant eye on industrial sites we regard as important so that action can be taken at, if not before, the earliest stage of development. Winwick Watermill (SP 62767348) is on the Winwick Brook, a tributary of the River Avon. The mill stopped working during World War II. After an accident to a boy whilst running on the waterwheel to turn it, the spokes of the waterwheel were cut rendering the waterwheel incapable of rotation. A few parts of the gearing were removed at the same time but otherwise the machinery was complete when inspected in 1964. It was still in this state, although a little more dilapidated, when the West Haddon Local History Society and the Northamptonshire Industrial Archaeology Group combined to make a measured survey of the mill in 1989. Soon afterwards the mill, adjoining mill house, outbuildings, millpond and paddock were advertised for sale, with a guide price of £220,000. The property was subsequently developed by integrating the mill and mill-house to provide a large dwelling with late twentieth century facilities, but with little alteration to the exterior and layout of the buildings and leaving much of the machinery on the original ‘stone floor’ of the mill as a feature. The owners cleared the pond, tail race and bypass channels and planned to replace the waterwheel. However, in 1992 the mill was advertised for sale at £495,000. The new owners made few alterations to the buildings and the mill machinery and the 2001-2002 Watermills Survey for Northamptonshire County Council reported: ‘This is one of the best (in the county) watermill sites for showing the relationship between the mill, its water supply and its surroundings, something which has been lost elsewhere... The Winwick site should be considered of county significance.’

In 2007 the following was advertised: ‘The Old Mill, Winwick. Converted Grade II Listed, watermill retaining some mill gearing. Gardens, millpond. £399,000.’ This reduction of about £100,000 in the price compared with that 15 years previously should have warned of drastic changes having taken place at Winwick Mill. Unfortunately the recently opened West Haddon bypass had cut the minor road between Winwick and West Haddon, so that the mill site was virtually in a cul-de-sac and it was no longer easy to view the mill. At the end of 2007 English Heritage received an application to remove the Grade II listing from the building and, as a caseworker for the SPAB Mills Section, Geoffrey Starmer was asked to check on the situation. He found that the site had been divided into three separate dwellings with a completely new access to the former mill house, cutting across the overflow channel from the millpond. After separating the mill house from the mill itself, the living space in the latter would be somewhat limited for modern living with the machinery in situ. De-listing the property would enable this machinery to be thrown out and it is assumed that this is the present owner’s intention. However, the division of the site into three separate properties has already diminished the historical importance and coherence of the site and one wonders how the owners obtained planning approval for this from the local district council.

Burton Latimer North Mills on the River Ise between Kettering and Wellingborough in Northamptonshire has had a multitude of uses. Apart from flour production, during the eighteenth century it was a cotton mill and in the nineteenth century it was successively a silk mill, carpet manufactory, worsted mill, chincry and mustard mill and then a flour mill again. It is now part of the Weetabix manufacturing complex.

In August 1876 when it was a flour mill belonging to J. & T. Wallis, there was a fire which gutted the building. During it rebuilding in 1877, a young man who was engaged in the work, wrote to his grandfather: ‘We have not quite finished the floors of the mill, we hope to be finished by the end of the week, they are made of broken bricks and cement in arches; we make the arch of planks and then put the brick and cement on it until it is quite set and then take the boards away. At the top of the arch it is only 5 inches thick, it is wonderful the weight they will carry. In one room we have 9 bins made of sheet iron each weighing a ton and these will hold 140 sacks of wheat, (these would weigh 15.75 tons each) so they must be very strong.’ The letter was accompanied by a sketch showing the arrangement.

This letter and drawing have recently been rediscovered and an enquiry made as to whether this fire-proofing still existed. Consequently the Chief Engineer of Weetabix extended an invitation to visit the site in December 2007 when it was found that the 1877 structure remained, with cast-iron columns supporting the iron beams between which the curves in the ceiling were clearly visible. This was despite the coating of thistle plaster, painted white, providing a very good hygienic interior which now accommodates modern plant to produce Alpen. How good it is to see a 130 year old building still being used for twenty-first century food production.

Leicestershire Industrial History Society continues its hands-on dig at the NW Leicestershire Swanington mine site. The substantial brick foundations of either a boiler or an engine, approx 10 metres long and at least 2 metres deep have already been uncovered. On the same site is the previously excavated Califat engine house, and plans are drawn up for a new interpretation makeover of this site. This will include provision for the return of the ‘Haystack’ Boiler
recovered from the site by LIHS in the 1950s and at present languishing in the Snibston Museum store. This site will be open to the public for National Archaeological Week, 12-20 July 2008. LIHS has held off the photographic record of work being carried out in Glenfield Railway Tunnel on the Leicester to Swannington line as bats were discovered and all work stopped until April. All the work in which LIHS is currently involved can be seen on the website: LIHS.org.uk.

David Lyne & Geoffrey Starmer

West Midlands

Like Yorkshire (see IA News 144), the West Midlands were badly affected by the exceptional floods of 2007 and, in some places, are only just beginning to recover. Worst hit as far as the heritage was concerned, and attracting substantial coverage in the national media, was the Severn Valley Railway, whose track was breached in no fewer than 45 separate places between Bewdley and Bridgnorth. Near Highley, track and sleepers were left suspended in mid air when the bank beneath the line, as well as all the ballast and a nearby signal post, were swept downhill towards the River Severn. The opening of the Engine House at Highley was postponed, and through services were cancelled. Throughout the autumn and winter, trains were only able to run between Kidderminster and Bewdley, at the southern end of the line, and a shuttle ran in and out of the station at Bridgnorth.

Thanks to an amazing response from SVR members and the general public to a widely publicised Flood Damage Appeal, together with financial help from Advantage West Midlands and the European Regional Development Fund, the railway was able to re-open throughout to the general public on 21 March, when all trains were packed. The new Engine House at Highley, which houses a number of locomotives awaiting boiler repairs, together with Midland Compound No. 1000 on loan from the National Railway Museum, numerous audio-visuals and ‘hands-on’ activities for children, and a new café with train viewing balcony, was opened on the same day and was also inundated with visitors.

Less likely to make such a speedy and complete recovery is Daniel's Mill at Bridgnorth, with its large Coalbrookdale waterwheel, which featured on the cover of IA News 126 in 2003. It too was damaged by the floods, but local press reports indicate that the current owners are pessimistic about finding the necessary funds to carry out repairs and re-open to the public in the short term.

Further upstream, the Ironbridge Gorge Museum also suffered badly. It was not the usual story of the River Severn rising and creating problems at Coalport and the Museum of the Gorge, but blocked culverts and streams backing up and causing flooding in the most unlikely places. Rose Cottage, the distinctive black and white half-timbered property in Coalbrookdale, was one of the first restoration projects carried out by the newly-established Museum Trust in the early 1970s. A raging torrent of water engulfed the lower floors, and the wattle and daub so painstakingly applied 30 years ago was all ruined.

Even more improbably was a deluge of water which came down the road behind the Museum of Iron and engulfed 'Enginuity' and the former Coalbrookdale Company Erecting Shop, with the result that all the floors have had to be replaced. The persistent coverage of the floods, particularly on the local news, together with the dreadful weather, also led to a significant downturn in visitor figures, many members of the general public apparently believing that the whole area was underwater for the whole of the summer. It is hoped that this trend can be reversed by a major investment currently under way at Blists Hill, involving a new entrance building and exhibits, and the 300th anniversary of Abraham Darby's discovery of coke smelting which will be celebrated (with AIA involvement) in Coalbrookdale in 2009.

A poor season has probably also contributed to the closure of the now boarded-up Kynnersley Arms in Leighton, on the road between Kidderminster and Shrewsbury. Despite featuring on 'Time Team' a few years ago, and having the remains of an early blast furnace and corn mill machinery incorporated into the building, trade has not been sufficient to keep it going. Successive proprietors have always been willing to show interested groups and individuals the surviving tuyere arch in their cellar, and it would be a pity if this were to cease, should the building be converted to residential use.

In the West Midlands conurbation, a major loss has been the destruction of the imposing Shannon Mill in George Street, Walsall. This extensive four-storey complex, which was listed, was due to be converted into apartments and retail units as part of a £53m town centre regeneration scheme, but was destroyed by fire last August, with arson cited as the most likely cause. It was the biggest fire tackled by the West Midlands Fire Service in 25 years, and according to newspaper reports, the ferociousness of the blaze was partly attributed to the fact that it had at one time been a tannery, and years’ worth of oil had seeped into the beams. In nearby Wolverhampton, the former Mitchell and Butler’s Springfield Brewery, also damaged by fire some years ago, shows no signs of being renovated. Progress is, however, being made at the former Great Western Railway Low Level Station, where several structures are being sympathetically incorporated into a new development. There is already a Premier Travel Inn at the north end of the site, with the adjacent restaurant named ‘Bluebricks’ after the Staffordshire bricks from which the station is constructed.

In central Birmingham, the much-lamented Museum of Science & Industry in Newhall Street, where AIA Council meetings were held for a number of years, is no more. Hoardings announce ‘Coming Soon, Newhall Square. Birmingham’s Newest Square. Dynamic apartments/office/retail and leisure units in a canalside setting’. Fortunately, the adjacent Queen's Arms, where many a Council member’s thirst was once quenched, survives!

John Powell

Rose Cottage, Coalbrookdale, engulfed by a raging torrent of water during the floods of 2007

Shannon Mill, Walsall, destroyed in a suspected arson attack in August 2007

Photo: John Powell

Photo: John Powell
Regional Correspondents

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EMIAC 75: SETTING SAILS IN SNEINTON
at the Bakersfield Community Centre, Sneinton Dale, Nottingham, hosted by the Nottinghamshire IA Society. For details and a booking form send SAE to EMIAC 75, Joan Hodges, 2 Knighton Road, Woodthorpe, Nottingham NG5 4FL.

10 MAY 2008
MILESTONE SOCIETY SPRING MEETING
at Battle Town Hall, East Sussex, with a strong local theme based around the milestones and waymarkers of East and West Sussex, with table displays planned on Surrey, Kent and adjoining counties. This will be our first national meeting in this attractive part of the country and a good attendance is hoped for. Guests are welcome. Enquiries to John Atkinson via Terry Keegan, email: terry-keegan@supanet.com or Tel: 01299 832358.

17 MAY 2008
SWWRIC
at Kingswood Civic Centre, Bristol, the South Wales & West Region IA Conference, organised by Bristol IA Society. For a booking form, send SAE to Roger Davis, 8 Northfield Road, Portshead, North Somerset BS20 8LE.

19-24 MAY 2008
AIA SPRING VISIT TO SAARLAND
To be put on the mailing list, contact Paul Sautler, 80 Udimore Road, Rye, Sussex, TN31 7DY. Updates on www.heritageofindustry.co.uk

29 MAY – 1 JUNE 2008
SIA ANNUAL CONFERENCE
in San Jose, California, USA, the 37th Annual Conference of the Society for Industrial Archeology. Details, booking and membership on the SIA web-site, www.sia-web.org.

29 JUNE – 4 JULY 2008
6TH WORLD ARCHAEOLOGICAL CONGRESS
at University College, Dublin. The theme ‘Critical technologies – the making of the modern world’ will be of interest to AIA members, with four sessions on Archaeologies of internment; Atomic Archaeology; Method and Machine; and Nostalgia for Infinity. More details may be found at www.ucd.ie/wac-6/ including abstracts and details of the session organisers.

11-13 JULY 2008
NAMHO 2008
at the Lady Victoria Colliery, part of the Scottish Mining Museum, Newtongrange, the National Association of Mining History Organisations Conference co-hosted by Grampian Speleological Group. For a programme and booking form visit the website: www.namhoconference.org.uk

13-16 JULY 2008
TRADE AND INDUSTRY AROUND THE SOMERSET MOORS
at Dillington House, a course on IA around the Somerset Moors or ‘Levels’ through lectures and field visits covering river navigations, canals, bridges, warehouses, water drainage and the Westonzyoland steam pumping engine, and willow growing and basket making industries. Details from Dillington House, Ilminster, Somerset TA19 9DT, 01460 52426; website: www.dillington.co.uk

5-10 AUGUST 2008
ICOTHCE SYMPOSIUM
at Vancouver, Canada, a symposium celebrating the 40th anniversary of the International Committee for the History of Technology. For details, contact Angus Buchanan, e-mail: hssraab@bath.ac.uk.

22-28 AUGUST 2008
AIA ANNUAL CONFERENCE
at Lackham near Chippenham, Wiltshire, the AIA’s annual conference. A seminar ‘Modern Military Matters’ precedes the main conference, followed by field visits and evening lectures after the weekend. Residential or non-residential. Details and booking forms available from AIA Liaison Officer (see page 2).

1-4 SEPTEMBER 2008
TICCIH 2008: 1ST CHINESE INTERNATIONAL CONFERENCE ON INDUSTRIAL HERITAGE
at Chengdu City, The International Committee for the Conservation of the Industrial Heritage’s first conference in China. Everyone interested in presenting a paper is requested to send the complete title and its summary on one A4 page (about 500 words) by 29 February 2008. For further information, see website: www.mnacetc.com/TICCIH/

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

AIA logo

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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 7RJ. Tel: 0116 252 5337 Fax: 0116 252 5005.

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Combe Mill, Oxfordshire with its unusual bellcote and chimney (see page 13) Photo: Tony Simmons

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