

# WARWICKSHIRE

## Industrial Archaeology Society

NUMBER 7 JUNE 2002

PUBLISHED QUARTERLY

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### EDITORIAL

A constant source of surprise to me is just how much industrial archaeology there is in Warwickshire. I suspect that many outsiders' impression of the county is one of a rural shire and perhaps not the most likely place to find evidence of past industrial activity.

The truth is rather different of course. Both Birmingham and Coventry, once major industrial centres, were part of Warwickshire, while the rest of the modern county has evidence of industrial activity almost anywhere one cares to search; something that Peter Chater's industrial walks ably demonstrate. It is therefore disappointing to report below the apparent lack of interest amongst members for these short excursions. Each was a fascinating snapshot of our industrial heritage, as those who did attend will testify.

**Mark W. Abbott**

### SOCIETY NEWS

A feature of the Society's programme for many years, have been evening walks in a local area with industrial connections,

usually led by Peter Chater. This year Peter elected to try a different approach and proposed a series of walks on Sunday mornings, at fortnightly intervals. At the time of writing, two of these have taken place, sadly with poor support from members.

The first walk saw five members meet on a beautiful late spring morning at Leamington's Victoria Park, for a walk to the Emscote area of Warwick, via the Leam riverside path and the Grand Union Canal.

*En route*, there proved to be many points of industrial interest, starting with the Princes Drive bridge over the River Leam; an early example of a concrete built bridge. At the Grand Union Canal both the aqueducts over the railway and the River Avon were studied, a peculiar feature of the former being that the railway falls from Leamington to go under the structure, before climbing again to cross the Avon. In the lee of the Avon aqueduct Peter pointed out an apparently insignificant ditch, all that remains of the tailrace from Emscote Mill. This mill, which was demolished some years ago, was unusual in that it used the overflow from the canal as its power source.

After traversing Tesco's car park, once the site of Emscote power station, the walk continued across Emscote Road to Charles Street. Here, the only evidence remaining of Nelson's Gelatine Works is the imposing brick-built social club. However, further up Charles Street are a number of concrete built houses, dating

from the latter half of the 19th Century and provided by Nelson's as worker's accommodation. Two more larger houses, of similar construction (provided for management?), exist on All Saints Road.

The canal was then regained by way of All Saints Road and the environs of All Saints Church, for the return to the start.

The second walk was preceded by an almost biblical deluge and was consequently even less well supported than the first, with just two members walking from Hatton Station, along the Grand Union Canal, to Shrewley and back.

This commenced with a look at the now unmanned Hatton Station, where Peter was once Station Master with no fewer than 19 staff! Then, after a hunt for GWR boundary markers in the hedge along the canal, the walk continued to Shrewley with a stop at the Shrewley Canal Tunnel. Here considerable time was spent discussing how horse and boat might be efficiently separated, there being no towpath through the tunnel. The evidence of an *in-situ* rubbing post on the horse path and a roller at the Birmingham end of the tunnel, supports Peter's theory that the rope remained attached to the horse while it traversed the horse path.

The return to Hatton Station was made by field paths. Fortunately the weather held!

**Mark W. Abbott**

*Please see overleaf for advance details of the Society's new season of meetings.*

# NEWSLETTER

# Meeting Reports *by Arthur Astrop*

**March 2002 Anthony Coulls:**

## *Power in Manchester*

**T**he sheer density and variety of industries which sprang up in the North-west region of the UK during the industrial revolution and thereafter meant that it was an extremely important area for the development and application of all types of power units. It is entirely fitting, therefore, that the Museum of Science and Industry in Manchester should have what is possibly an unrivalled collection specifically dedicated to 'Man's use of power'. And it was the good fortune of WIAS to have Anthony Coulls, the Curator of Energy at that very Museum, as the speaker at its March 2002 meeting.

Anthony covered the entire field of Man's efforts to apply power to manufacturing, from early wind and water mills to the most advanced turbines, but understandably his main focus was firstly on steam engines, then on oil and gas engines, and finally on the generation and application of electricity. The Museum's collection of historic, restored, and most importantly *working* units in each of those fields of technology is most impressive, and as a resource both for research and for the enlightenment of the young it can have few rivals in the UK.

The museum and its exhibits are designed on the interactive pattern which is increasingly popular today, with an emphasis on 'working' as distinct from 'static' exhibits. Considerable effort has also been put into explaining the operating principles of each type of power unit. Using an excellent set of slides, Anthony in effect led us through the Museum, from early water wheels to a 1/3rd scale model of a Newcomen atmospheric engine, and onwards through oil, gas and internal combustion engines in general to examples of large high-speed steam turbines. In this journey it became apparent how many engine-building companies once flourished in the UK in general, and in the North-west in particular, and just how important a part they played in the development of all types of industrial power units.

The technological advances made by these engine-builders were frequently driven by the users of power themselves, who were based virtually on their doorsteps and who constantly clamoured for engines with greater output to drive more and more machines in larger and larger factories. Not least, the textile mills of the North-west were massive consumers of power and, as Anthony remarked, the size of those mills, the numbers of machines installed in them, and the thousands of workers they employed, are difficult to imagine today. But not all

engine development was aimed at horsepowers measured in the hundreds.

Anthony showed, for example, a slide of a tiny single-cylinder steam engine designed to drive an equally small dynamo which was installed in one corner of a shop window. The engine and dynamo provided just enough electricity to light the bulbs which illuminated the shopkeeper's display of goods. This was groundbreaking 'marketing' in its time and must have drawn the crowds!

Anthony's presentation went on to cover hot-air engines, the generation and storage of Town's gas, early means of generating electricity, and finally he touched on hydraulic power. For over 100 years, the city of Manchester had a hydraulic 'ring-main' carrying water at a pressure of 1,100 psi through thick-walled underground cast iron pipes. Manufacturing companies could literally plug-in to this main and use the hydraulic pressure as motive power. The system itself is long since out of use, of course, but the pipes are still *in situ* and today have been 'rediscovered'. They are being put to use for carrying cable TV!

## New Season Programme

**L**ooking forward to September 2002 and the new season of meetings, the following speakers have been booked:

**12th September 2002**

Roger Cragg: *The Stratford to Moreton Tramway.*

**10th October 2002**

Charles Catt: *Why Roads Exist.*

**14th November 2002**

Dr. John Bland: *Coal Mining in North Warwickshire.*

**12th December 2002**

Paul Howells: *Restoring the Royal Pump Rooms, Leamington Spa.* To be confirmed.

**9th January 2003**

Peter Coulls: *A Look at the History of Fairground Machines.*

**13th February 2003**

Anthony Grantham MBE: *Gas Making* To be confirmed.

A full programme for the 2002/2003 season of meetings will appear in the September 2002 edition of this Newsletter. A number of dates currently remain vacant, so suggestions of potential speakers remain welcome. Please pass details to a member of the committee.

# Nineteenth Century Roadbuilding

April 2002 Jo Bell:

## *Thomas Telford's Holyhead Road*

**A** long walk, mostly in the rain! That was how Jo Bell described the exhaustive survey which she and a colleague undertook, in 1998, of the 83-mile stretch of Telford's Holyhead Road which traverses east/west across Wales. Telford is recorded as having expressed the wish that this road, built between 1811 and 1824, should be his 'memorial' and it is undoubtedly one of his masterpieces.

To set the scene, Jo sketched in the general parlous state of Britain's major roads at the time when they were built by private venture, for private gain and with private vested interests having a marked influence on the routes they took. It was only at the beginning of the 19th century when, for political, economic and military reasons, the Government started to take an interest in road routes and their construction that things began to change for the better.

Telford planned his roads, and the Holyhead Road was no exception, on rational routes ignoring (if not actually riding roughshod over) vested interests, and introducing tight control over design and construction. Under Telford's management, the Welsh section of the route for the Holyhead Road was divided into discrete blocks of varying lengths but of approximately equal work content.

These blocks were bid for by contractors who, once they had won a contract, came under continuous scrutiny for adherence both to specification and to start and finish dates. Telford's 'site inspectors' were empowered to order contractors to tear up and remake, at their own expense, any stretch of road which fell short of specification. Quality control, as we would know it today, was imposed on all aspects of construction, including the use of gauges to monitor the sizes of the aggregates used.

Telford could impose such tight specifications because he had Government money behind him, and he also had at his disposal the craft skills and the technology (i.e. sheer blasting power!) to follow his chosen route and simply force the road through any obstacles which lay in its path. Gradient control was very important to Telford, and he aimed never to exceed an incline steeper than 1 in 30. At various points along its route, the road had to cross water, and traversing the Menai Straits was probably Telford's greatest challenge. The suspension bridge he designed to span the Straits, which was the largest of its type at the time, was built between 1824 and 1826.

Jo showed a number of excellent slides taken during her survey in which even parts of Telford's original constructions could still be seen. Also still to be seen are some of the Telford-designed toll houses on the road, together with smaller items of road furniture such as 'sunburst' gates and his standard pattern of milestones. Jo announced that the complete survey of the Welsh section of Telford's Holyhead Road will be published in book form later this year.

The April meeting concluded with short contributions from two WIAS members, namely Roger Cragg and Martin Green. Roger gave an account of an organised visit to various industrial archaeological sites in Limerick. He touched on the canal from Dublin to Shannon; the Barrington Bridge built in 1818 and featuring some interesting wrought-iron tubular construction; and a hydroelectric power station built in 1929 by Siemens Schukert and fed by water with a 100 ft head. This station at its peak supplied 80 per cent of Ireland's electricity. Other sites described by Roger included Limerick Docks and the Foynes flying-boat terminal and rail head.

Finally, Martin Green described a short visit to Londonderry, showing pictures of the 'walled city', the route of the Bloody Sunday March, and some poignant shots of the city's now silent flax mills which, at one time, employed many thousands of workers.

## Society Library

**M**embers are reminded that the Society is an affiliated member of The Association for Industrial Archaeology. This entitles the Society to receive a copy of the AIA's publications; the biannual *Industrial Archaeology Review* and the quarterly *Industrial Archaeology News*. These are held by the Treasurer and are available to members on request.

Those with a general interest in IA may find the journal *Archivemore* to their taste. This is picture led and the current edition (Issue 34), includes an article on the Argyll Motor Works; a description of the Bude Canal and the second part of a two instalment look at the Cardiff (Llanishen) Royal Ordnance Factory. Again, the Society subscribes to this publication and copies may be borrowed through the Treasurer.

Regrettably, for logistical reasons, it is not possible to formally offer the loan of these journals at meetings.

# IA in Northants

## February 2002 Geoffrey Starmer: *Industrial Archaeology in Northamptonshire*

**W**ith a history to date of at least 40 years, the Northamptonshire Industrial Archaeology Group (NIAG) must be one of the strongest and most vigorous in the Midlands and, as such, is both an example and an inspiration to others in the region. Its range of activities, and the authoritative position it has established, were vividly described by Geoffrey Starmer, a stalwart of NIAG and an enthusiast for all aspects of IA.

Indeed, Geoffrey's enthusiasm illuminated his coverage of every aspect of IA which has been tackled by his Group, including the iron ore industry, footwear, transport (road, rail, canals), the utilities, breweries and foundries. The iron ore industry, centred around Lamport, Brixworth and Scaldwell, was once of major significance to the County and Geoffrey had a number of slides showing workings when it was at its height. These included an extensive pylon-supported ropeway by which the ore was carried over long distances, high above ground, to processing plants. Narrow-gauge railways and blast furnaces also featured in his slides.

The boot and shoe trade has been of great importance to Northamptonshire and Geoffrey had a series of slides showing practices in that industry in its early days, when everything was carried out manually by skilled craftsmen working in what were, by today's standards, Dickensian conditions. Some of those practices, moreover, prevailed until well past the middle of the 20th century, must have constituted a Factory Inspector's nightmare, and may have contributed to the industry's subsequent decline. The shoe industry was originally based primarily on 'out-workers', labouring away in their own homes, and it was not in fact until 1857 that the first 'shoe factory' proper was built. Some of the slides showing skilled workers making the uppers for surgical shoes from hand-drawn 'brown paper patterns' were fascinating.

Northamptonshire has a long history of brewing

and at one time there were no fewer than 10 breweries in Northampton town alone. The same was also once true of the iron foundry industry in the County, of which slides of pattern-making, moulding and iron-melting cupolas were shown. Today one foundry alone survives.

In the field of 'utilities', Geoffrey concentrated on Northamptonshire waterworks and showed some splendid slides of beam engines, filter beds, pumping stations, the Ravensthorpe reservoir and the 1868 Castle Ashby water tower. The latter, incidentally, was scornfully dismissed by Pevsner as being of 'little interest', but today is cherished as a splendid example of well-designed and executed 'waterworks' architecture.

Finally, Geoffrey turned to transport where his County, in the famous Watford Gap area, has a unique juxtaposition of the old and the new in the shape of Roman roads, canals, railways, and 20th century motorways all competing for the attention of the industrial archaeologist. Aerial photographs of the area, showing the splendid brick-built ventilation shafts of the Blisworth tunnel from an angle rarely seen, were included.

An important point for NIAG came in the 1990s when a County Sites and Monuments Officer was appointed, and the Group recognised that its procedures had to be revised and its activities needed to become more 'professional'. This has been achieved, and today some of its enthusiastic 'amateur' workers have even moved into the laptop era!

### ADVANCE NOTICE OF THE AGM

The AGM of the Society will be held on Thursday 11th July at 7.30 pm. Some changes to the committee are anticipated, so the attendance of all members is requested.

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