

RETORT!

THE BULLETIN
OF THE
WARWICKSHIRE
INDUSTRIAL ARCHAEOLOGY
SOCIETY



SUMMER 1997

ISSUE SEVEN

RETORT!

The Bulletin of the Warwickshire Industrial Archaeology Society

ISSUE NUMBER SEVEN

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EDITORIAL

At a recent Local History Fair a member of the public strolled casually up to the WIAS stall and immediately posed a very simple and direct question - "What exactly do you do in your Society?" I paused for a moment and then launched into a long list of all the Society's activities. It was only when he had departed - apparently satisfied ... even impressed ... with what I had said - that I wondered whether I had given him a slightly false picture of what actually goes on.

So, what does the Warwickshire Industrial Archaeology Society really do?

- at the heart of the Society's activities is the regular monthly meeting held for all but two summer months of the year. Details of 1997/8's programme is included in this edition. The Chairman, Toby Cave, is instrumental in maintaining the volume and variety of the programme.
- the monthly meetings not only enjoy the benefits of visiting speakers, but also allows members to present topics to the Society as a whole. Several members of the Society pursue individual research topics and the Society tries to give support to these projects.
- a major project has been the Bridges of Warwickshire Project, co-ordinated and master-minded by Roger Cragg. This has been a considerable success.
- the Society contributes to the national IRIS project, although in a very modest way. Some material from the Bridges Project has been transferred to IRIS forms, again thanks to Roger Cragg.

- the Society has held a number of visits and walks, mainly in the summer, and Peter Chater has been our guide on many of these occasions.

- the Society belongs to the Association for Industrial Archaeology, and exhibited for the first time in 1996 at the Annual Conference.

- the Society publishes an occasional bulletin - Retort! - which relies heavily on contributions from members. Pamphlets are also produced, and in 1997 the first Occasional Paper - John Brace's 'Seven Springs' - eventually made it to the bookstalls.

- the Society attends a range of Local History Fairs in order to try and spread the word. The Society's display material has been greatly enhanced by the photographic skills and meticulous preparation of our Treasurer, Mark Abbott.

- the Society has been asked to speak at a number of Local Groups, including recent visits to Polesworth and Harbury. The Secretary usually takes on this responsibility.

You might argue that this list is quite sufficient. The Society brings the subject of industrial archaeology to the attention of at least a few, has carried out some important research, and the meetings provide a chance to broaden knowledge, to sample Richard Storey's bookstall, as well as to meet and exchange views in a friendly, relaxed atmosphere.

Do the members of the Society need more than this?

We would be eager to hear your views. For their part, the officers of the Society feel that two aspects deserve urgent attention:

1. A real gap in the functioning of the Society is that the process of recording of sites tends to be a fairly intermittent and random affair - apart from the bridge survey. Those with long memories will remember the early days of the Society and our attempts to record sites by parish. The wheel seems to have turned full circle as we plan to embark on a Gazetteer of IA sites in Warwickshire. The members' slot at each meeting may be occupied by these attempts to build up the database.
2. A genuine effort is to be made to increase the published output of the Society, probably via more pamphlets, occasional papers and issues of Retort! This will culminate in the eventual publication of the Gazetteer.

Martin Green

Perhaps the simplest approach would be to have a brainstorming session in which as many sites as possible can be listed, and then the Gazetteer Publishing Group could have the task of sorting into some sort of appropriate classification and order. Each site could be given a symbol in the manner adopted by AIA publications.

SC	Protected as a Scheduled Ancient Monument
LSI; LSII*; LSII	Protected by Listing, as Grade I, II*, II
CA	Conservation Area
CP	Country Park
NR	Nature Reserve
*	Sites which can be seen from a public place, including public streets and footpaths
□	Sites open the public, including public buildings, museums open at fixed hours, and canal sites where the towpaths are normally accessible to the public
■	Sites on private land or not visible/accessible
DEM	Important sites where all remains have been demolished

You will note that this classification does include important sites that have been demolished.

So I hope that we can begin this process by taking a particular area - or industry - and producing a preliminary list at each monthly meeting in 1997/8.

Some sites have already been recorded either as IRIS entries, Warwickshire Bridges Survey (or both), existing entries on the SMR, or via previous efforts at this procedure by WIAS. We are not seeking the level of sophistication of the IRIS entry, but our preliminary listing could be the basis of a later more elaborate record.

I include a couple of examples of Roger Cragg's work to indicate the goal to which we are working - Wootton Wawen aqueduct on the southern section of the Stratford Canal and the Tramway bridge at Stratford upon Avon.

AIA - Index Record for Industrial Sites

Box 1

SITE NAME
WOOTTON WAWEN AQUEDUCT
Address On Stratford upon Avon Canal 0.5 km east of Wootton Wawen on A3400
District/Borough Stratford upon Avon
Parish/Township Wootton Wawen

Box 2

IRIS NUMBER
WA / WIAS / RC4
Part of:
Associated with:
SMR no:
NMR no:

Box 3

NGR1 [S.P] [1.5.9.0] [6.3.0.0] NGR2 [] [] [] []

Box 4

Class: InWatr/1813	
Site Term: Canal Aqueduct/1813	
Site Significance: <input checked="" type="radio"/> L / R / N / I 1813 < 1700. 1750 [1800. 1850. 1900. 1950.] PRESENT One of three similar cast iron aqueducts on the Stratford upon Avon Canal	
At Risk? <input checked="" type="radio"/> In use / <input type="radio"/> Partly in use / <input type="radio"/> Disused	Fixtures? Y <input checked="" type="radio"/> N <input type="radio"/> U Machinery? Y <input checked="" type="radio"/> N <input type="radio"/> U
Site Details: A cast iron trough aqueduct carrying the Stratford upon Avon Canal over the A3400 road. Four unequal spans with a total length of about 100 ft. Trough is formed from 12 cast iron sections with bolted joints (similar to Bearley (Edstone) Aqueduct (qv). Trough spans are given additional support by cast iron beams. The trough side sections are not of equal lengths and vary from 7 ft to 9 ft 1 in. in length. Towpath is set level with the bottom of the trough on the west side of the aqueduct. Beams are 3½ in. thick and 8½ in. deep at the ends and 12 in. deep at the centre. In addition the road span has had two steel joists added in recent years following damage by road vehicles. [Contd. overleaf]	PRIME MOTIVE POWER Muscle _____ Wind _____ Water _____ Hydraulic _____ Steam _____ Pneumatic _____ Electric _____ Combustion _____ None <input checked="" type="checkbox"/>

SITE COMPONENTS

No	Component Term	Period	Form	Importance	Status
1	Canal Aqueduct	1813-present	Structure	H/M/L <input checked="" type="radio"/> S/G/N	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N

AIA - Index Record for Industrial Sites

(page 2)

Box 5

IRIS NUMBER

WA / WIAS / RC4

Box 6

Other Status:

Site History: Aqueduct was built by the Stratford upon Avon Canal Company and is one of three similar aqueducts (see Bearley (Edstone) Aqueduct [IRIS No. WA/WIAS/RC5] and Yarningale Aqueduct [IRIS No. WA/WIAS/RC3]). It bears an elliptical plaque on its east face with the following wording:

'This aqueduct was erected by the Stratford Canal Company in October 1813.

Bernard Dewes Esq. Chairman, W. James Esq. Depy. Chairman, W. Whitmore Engineer'

The aqueduct remains in full use although it has been damaged on several occasions through being struck by road vehicles passing under its restricted clearance.

ASSOCIATED PERSONS/COMPANIES

Name	Details
William Whitmore	Engineer to the Stratford upon Avon Canal Company, Designer.
William James	Promoter of several canal and railway schemes.
Horseley Ironworks	Ironfounders

Site Recording: Recorded for Inst. Civil Engrs P.H.E.W. with photographs

Sources: 1. Institution of Civil Engineers - P.H.E.W. - HEW No. 282

2.
3.
4.
5.

Date of Last Visit: June 1994 Reporter: Roger Cragg

Compiler: Martin Green Date: November 1996

Society: Warwickshire I.A. Society

Box 7

Continuation Box: Site Details (Contd.) Three brick piers. Cast iron handrail on towpath side. Brick abutments. Commemorative plaque on centre of east side (see Site History, above).

AIA - Index Record for Industrial Sites

Box 1

SITE NAME

TRAMWAY BRIDGE, STRATFORD

Address: Over River Avon

Stratford upon Avon

District/Borough: Stratford upon Avon District

Parish/Township: Stratford upon Avon

Box 2

IRIS NUMBER

WA / WIAS / RC6

Part of:

Associated with:

SMR no:

NMR no:

Box 3

NGR1 [S.P] [2.050] [54.79] NGR2 [] [] [] []

Box 4

Class: RailTran/1826

Site Term: Railway Bridge/1826

Site Significance: L / R / ☒ / I 1826 < 1700. 1750 [1800. 1850. 1900. 1950.] PRESENT

One of the few remaining intact relics of the Stratford & Moreton Tramway.

At Risk?: In use / ☒ / Disused

Now in use as a pedestrian bridge.

Fixtures? Y ☒ N

Machinery? Y ☒ N

Site Details: A nine span brick arch bridge built to carry the line of the Stratford & Moreton Tramway across the River Avon. In red brickwork with nine semi-elliptical arches, each of 30 ft span, the last two arches at the south end being over dry land. Total length of the bridge is about 350 ft. Width between parapet walls is 10 ft 8 in. and the brick parapet walls are 1 ft 3 in. wide.

Brick piers are 6 ft wide and the arch rings have two courses of brickwork.

PRIME MOTIVE

POWER

Muscle

Wind

Water

Hydraulic

Steam

Pneumatic

Electric

Combustion

None ☒

SITE COMPONENTS

No	Component Term	Period	Form	Importance	Status
1	Railway Bridge	1826 - present	Structure	H/M/L <input checked="" type="radio"/> S/G/N	<input checked="" type="radio"/> S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N

Box 6

Other Status: _____

Site History: Act for the Stratford & Moreton Tramway passed in 1821. Railway was opened in 1826 as a horse drawn tramway. Leased by the Oxford, Worcester and Wolverhampton Railway in 1847 then ownership passed to the G.W.R. in 1869. Section of railway including the bridge was last used about 1904. Track lifted in 1918.

The bridge is now used for the route of a footpath following the route of the railway from the old terminus alongside the Stratford Canal basin to the outskirts of the town.

ASSOCIATED PERSONS/COMPANIES

Name	Details
William James	Promoter of the Stratford & Moreton Tramway
John U. Rastrick	Engineer of the line and designer of the bridge.

Site Recording: Photographs. I.C.E. P.H.E.W. Record exists (see below)

Sources: 1. Institution of Civil Engineers - P.H.E.W. - Record Form for HEW No. 868
2. Norris J. The Stratford & Moreton Tramway. Railway & Canal Historical Society, 1987
3. _____
4. _____
5. _____

Date of Last Visit: April 1995 Reporter: Roger Cragg

Compiler: Martin Green Date: January 1997

Society: Warwickshire Industrial Archaeology Society

Box 7

Continuation Box: _____

Air Commodore Sir Frank Whittle

Since his death on 9th. August 1996, many words have been written about Frank Whittle, and it seemed appropriate to include some of these to remind us of his pivotal role in the development of the jet engine. John Golley wrote the obituary in The Times, and this began:

"A lecture by Frank Whittle was a refreshing cocktail of technical brilliance, laced with bubbly humour and occasionally spiked with a quip or a joke to avoid any sense of pomposity. For his listeners, aware they were in the company of an eminent Englishman and one of the greatest engineers of all time, it was an unforgettable experience.

In to-day's fast-moving world most of us take the jet engine for granted, as it powers us to almost every corner of the globe. It is easy to forget that by inventing and giving birth to the turbojet, Whittle changed the lives of countless millions of people throughout the world. Few of us know that it was Whittle's engine that introduced America to the jet age, or that (after losing seven years failing to get any support) he still gave Britain a two- to three-year lead in jet technology immediately after the Second World War. However, many across the globe still identify him as the jet pioneer, and his name is indelibly printed in the annals of aviation history and technology"

Sir Stanley Hooker of Rolls-Royce said of him:

"Whittle had an unrivalled grasp of the fundamentals of thermodynamics and aerodynamics, and he never did anything until he had given it the deepest and most logical consideration. As I came to understand his work, I realised that he had laid down the performance of jet engines with the precision of Newton, a feat whose magnitude he never appeared to appreciate."

Leslie Cheshire of BTH who worked with him commented:

"The thing I most remember about Frank Whittle was his total absorption in what he was doing - a total concentration which impinged itself on the atmosphere surrounding him. It was very hard for anybody to evaluate him, because he was a many-sided person who had a charming naivete. He trusted people, and believed that everybody was motivated by common good."

Programme 1997/98

Meetings of the Society are held on the second Thursday of each month in the Sixth Form Centre at Warwick School, starting at 7.30 p.m. A map of how to find the Sixth Form Centre at Warwick School is available from the Secretary.

The meetings for 1997/98 are:

1997

- 11th. September Ron Hall: 'Letter Boxes and their History'.
- 9th. October Ray Shill: 'The Birmingham Canal System and its Carriers'.
- 13th. November Robert Herring: 'Restoring Vintage farm Machinery'.
- 11th. December Roger Cragg: 'The London and Birmingham Railway'.

1998

- 9th January Michael Price: 'The South Wales Railway Coal Trade'. Illustrated by video.
- 13th February Edward Woodward: 'The Coventry Canal'.
- 12th March Jim Foster: 'Aspects of the History of the Telephone System'.

9th April Fire Service Preservation Group - Midlands Branch. Speaker and subject to be confirmed.

14th May Keith Thomas: 'Brickmaking in North Warwickshire'.

11th June Annual General Meeting and Members' Evening.

The majority of the time at these meetings is occupied by our speaker, followed by refreshments, and a subsequent period for questions and follow-up material.

The final part of the meeting is then usually taken up with a brief contribution from one of our members, often concentrating on an aspect of the industrial archaeology of Warwickshire. Our aim is to develop a gazetteer of the IA sites in Warwickshire.

We are always keen to have contributions from members - do not be afraid to put yourself forward for one of these presentations.

Occasional additional events will also take place during the year, and members will be duly notified of these.

The Marston Hill Brick and Tile Company, Priors Marston.

by

Alan Flint

Evidence for the existence and operation of a brickyard at Priors Marston during the second half of the nineteenth century remains rather sketchy. The brickyard was not mentioned in the 1850 edition of White's Directory, but the 1874 edition shows John Cockerill as manager, and his wife as brickmaker. Other oral and documentary evidence supports this, with a suggestion that the yard closed down in about 1895. Use of the site over the next forty years varied considerably, but included a slaughter house in one of the buildings, with the butcher living on site in the cottage by the roadside.

The clay of the area is well-suited to brickmaking, and so it came as no surprise that the owners - the local Alsop family - (who themselves already had brickmaking experience and connections at Napton and Cherry Orchard, Kenilworth) decided to reopen in 1939. This came to a temporary halt in 1941 when the manager, Eric Alsop, was called into the RAF. During the War, the buildings were used by the TOC Machine Tool company, evacuated from Coventry.

Following Eric Alsop's early release from the services, the brickyard was re-opened in 1945. The brick-walled, tiled-roof buildings and the machinery were renovated for both the 1939 and 1945 openings. The first 10,000 facing bricks were sold in January 1946 to Ludwells of Leamington Spa. The sales ledger subsequently shows transactions to some 232 firms, many of them local. The wage for the manager in 1939 was £3 per week, with brickmakers - depending on production levels - earning £2 per week. Wages remained the same for the 1945 re-opening. An average of five men were permanently employed at the works for the next 25 years.

The clay was dug by hand out of the adjacent hillside, ensuring that all ironstone overlap had already been removed, for this shattered in the kiln. The clay was loaded into four wheeled tipper trucks that were pushed on narrow gauge rails into the first floor of the buildings where the Pug Machine was situated. This worked the clay into a pliable state for moulding and an Auger moved it forward to the brickmakers' benches. The moulds were wood, hand-made on site to an architect's specification for any

shape - including window mullions, bullnoses, coves, chamfers, plinths. Even so, the bulk of each burning in the kiln was for standard facing bricks. Drying of the "green" bricks was on the ground floor of the same building with warm air forced through ducts from a coal-fires boiler. The two kilns were outside in the yard with a shared central chimney.

Following a fire caused by an electrical fault, a new steel framework and asbestos-clad building was erected in 1960. This was again two-storey, with the first floor level with the hillside clay face. The clay was fed into the first floor by dumper trucks where it was loaded into a 7 foot (2100 mm) circular pan. A little water was added, and it was fed, guided by channels, under two rotating steel rollers some 18 inches (450 mm) wide, linked to a central rotating drive shaft. The processed clay was forced through a grille at the base of the machine into a collecting hopper that fed onto a continuous belt with shallow metal scoops that raised it some 6 feet (1800 mm) into the Pug Machine. This had a central drive shaft with rotating paddles that worked the clay into the right pliable state for moulding. The clay was fed by Auger into a pipe with a 10 inch (250 mm) square opening at the end.

This was then stacked onto the several brickmaking benches, with metal moulds for standard facing bricks and brick for specials. The mould was set on the bench and coated in sand. The clay was then thrown into the mould to force out the air, and any surplus clay would be removed by a wire cheese-cutter type tool. An experienced brickmaker could make some 900 - 1000 bricks per day. The sanded and spaced bricks were then stacked on slatted floors, for the new building had been erected over the kilns and the surplus heat rose from the kilns through the slats to dry the green bricks. When ready, they were loaded into the kiln below, with about 60 facing bricks per barrow load lowered by lift.

The kilns had two coal fires per side, each with a hopper that took six barrow loads of coal that could last for up to seven hours. The coal was fed into the base of the fire by an Auger with fan-assisted draught. A series of brick-built channels and ducts under the brick floor fed narrow slots some 12 inches (300 mm) apart that distributed the heat as evenly as practical. Dampers controlled the central chimney. Heat was recorded on four thermal lances. The bricks were stacked (called setting) so heat reached all sides and the bottom 4 feet (1200 mm) were always facing bricks. In fact, the bottom 2

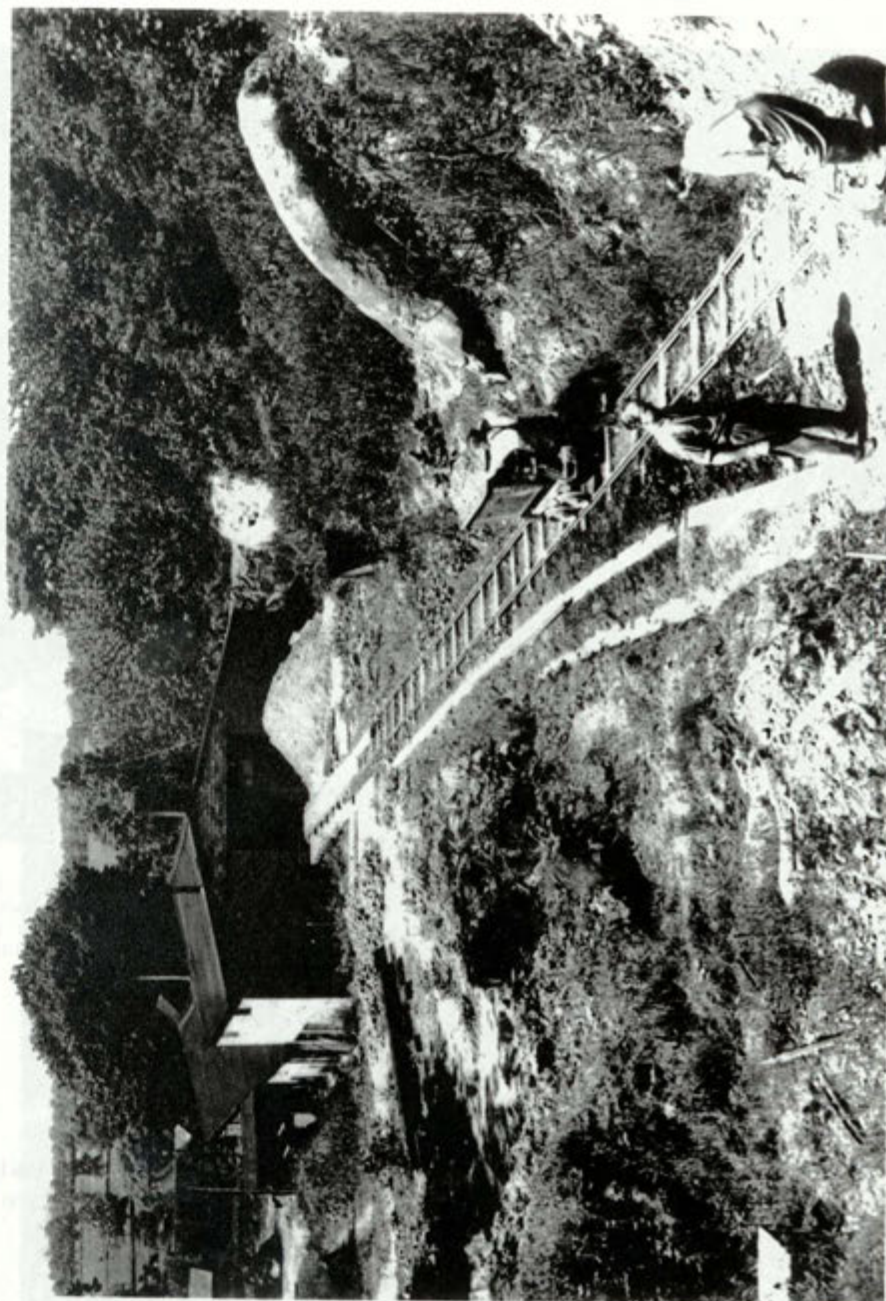
rows were left in for several burns as they always became very brittle. The specials were always set higher up the kiln, with the smaller fireplace bricks at the every top. If all the bricks were facing bricks, then there would be about 20,000 bricks per burn, but this could almost double in number if fireplace bricks were incorporated. A typical burn would take a 14-day cycle of setting, warming-up, intense two-day heating of up to 1000 degrees FH, cooling down, and unloading (called drawing). The doorway to the kiln (called the wicket) was bricked up and plastered over with sand and clay, apart from the inevitable spy-hole.

The colours of the bricks varied according to the type of clay and sand used, together with the proximity of the firehole, and the height of the kiln. Those close to the top of the kiln tended to be deep, rich red in colour, whilst those nearest the fires became - not unsurprisingly - almost black.

The bricks were collected by contractor, with a large number being used in civic buildings and churches, including the Church of the Holy Name in Bow, London, and a new 1960 Church in Newbury. Surprisingly, only a few buildings in Priors Marston itself have been built using local bricks - from either the old or newer yards. However, more are evident in garden walls, outbuildings and extensions, some using overburns and seconds provided - no doubt - at a cheaper rate.

From about 1960, part of the production was switched to fireplace briquettes of various shapes and sizes, sold as fireplace kits. A well-illustrated catalogue provided a range of designs, and they were actively and successfully promoted by several companies. Two fireplaces of this type were installed on the Royal Sandringham Estate.

The yard was sold by Eric Alsop in 1957 to a London Company which retained the original name and Eric as manager until 1962. A year later, the name Marston Hill Brick and Tile Company ceased when it was purchased by the Allied Brick and Tile Company and was combined with the Napton yard. The Priors Marston yard was closed in 1970 and after attempts to start a small industrial estate, the site was designated for housing. The clay face, with topsoil added, was sloped to form a more practical angle for gardeners. Houses were erected where the kilns and production buildings once stood. No sign of the brickyard remains, except for the name, many local memories, and - of course - the bricks themselves in a variety of different locations across the country.



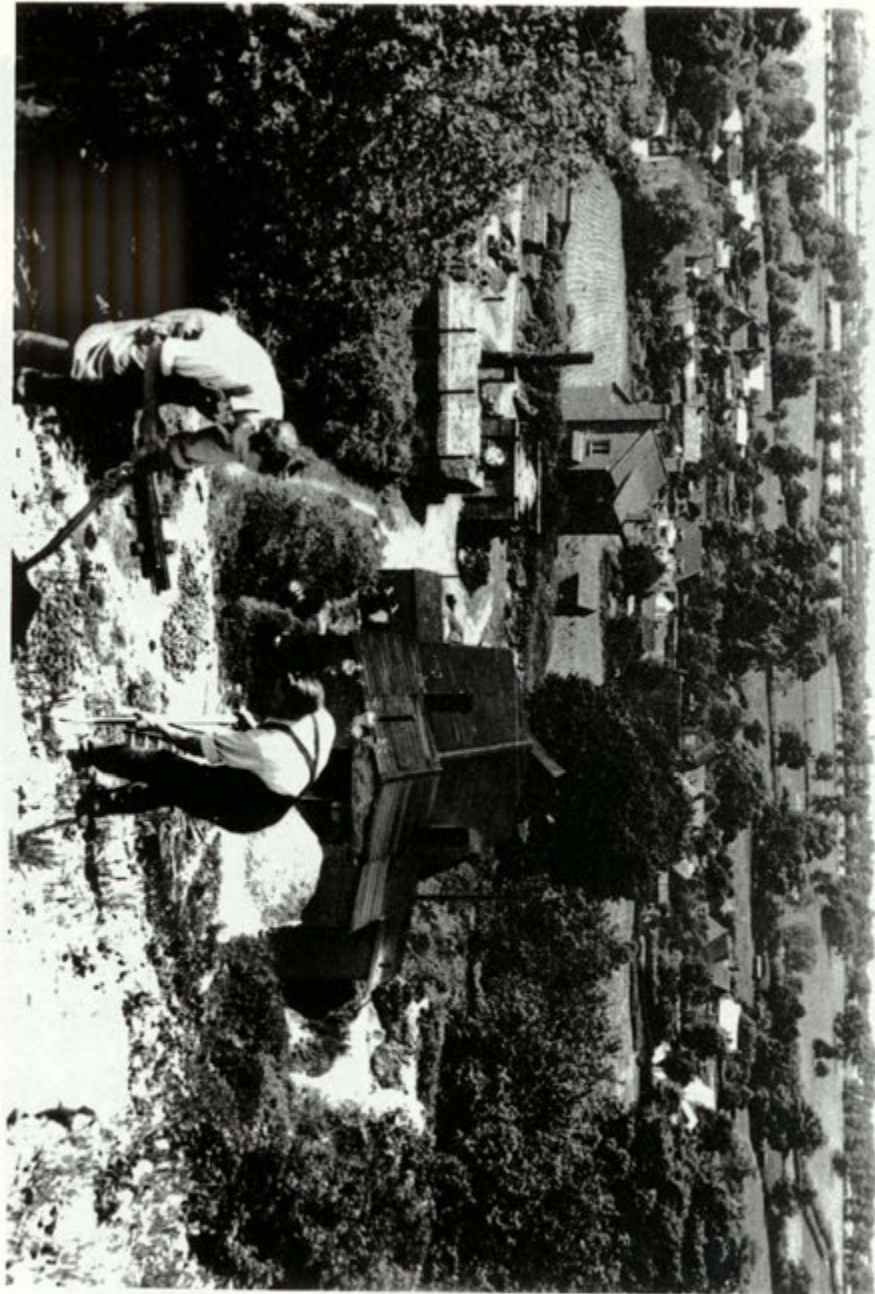
A view from the hill of the Marston Hill Brick and Tile Company in 1953



Mr. Alsop of Priors Marston, Warwickshire, carries on today the brickmaking business handed down to him by his forbears. All his products are hand made in the moulds, each of which is specially designed for his customers special requirements. Here for instance are bricks being turned out which, after firing, will be used in the construction of mullioned windows in a nearby country house.

Two photographs of bricks being prepared at the Marston Hill Brick and Tile Company during the 1950s. The gentleman in the photograph above, and on the right in the photograph opposite is Mr. Reg Taylor.





A view from the hill of the Marston Hill Brick and Tile Company in 1953

One small transaction for the Brickyard, Priors Marston in 1883

BRICKYARD

Priors Marston Oct 29 1883

Mr Linnell

Bought of JOHN COCKRILL

No.		PRICE.	£	s.	d.
	Bricks	-	-	-	-
	Coping Bricks	-	-	-	-
	Pipe Tiles, 2 inch.	-	-	-	-
	" " 3 "	-	-	-	-
	" " 4 "	-	-	-	-
	" " 6 "	-	-	-	-
	Plain Tiles	-	-	-	-
50	Quarries	-	-	-	-
paid J Cockrill £			6	3	

Company notepaper in the 1930s

Phone: BYFIELD 297.

Head Office:
24, Market Place, Rugby.

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M

Dr. to

THE MARSTON HILL BRICK & TILE Co., Ltd.

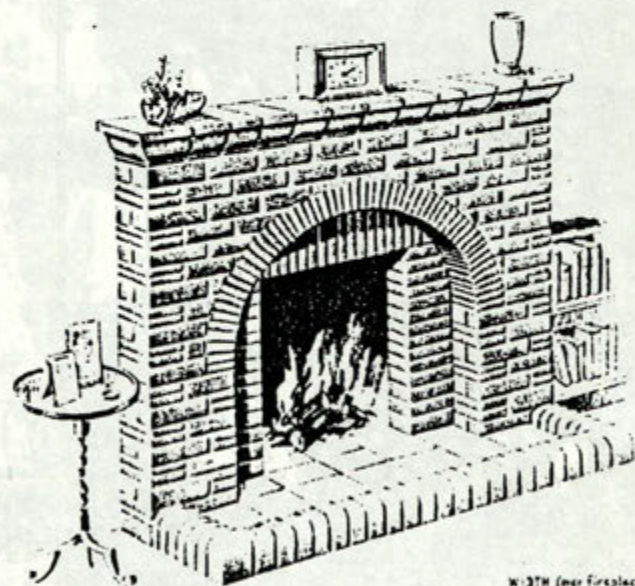
Brick and Tile Makers.

Directors:

H. W. ALSOP.
G. ALDERMAN.
W. H. HODSON.

WORKS:

PRIORS MARSTON,
WARWICKSHIRE.



MARSTON 81

WIDTH (over fireplace)
WIDTH (over shelf)
HEIGHT
FIRE OPENING

4'-0"
4'-4"
3'-5"
18"

Marston Fireplace Design

AIA Conference 1996

John Selby and his wife Valerie have been loyal supporters of the AIA Conference and he has always sent *Retort!* a detailed account of the proceedings. We have also enjoyed John's slides of the Conference shown at our monthly meetings. Although it is some while since the Bangor Conference took place, I still feel that an edited version provides an insight into the nature of these Conferences and may entice more members to attend.

"This year was the 23rd. Conference, the first being at Keele University in 1974. In these years, I have only missed five - Penzance, London, Aberystwyth, Glasgow and Guildford. I believe I was the only member at this Conference who was also at the first! My interest in IA started with the reading of Arthur Raistrick's 'Old Yorkshire Dales' and then his 'Industrial Archaeology: an historical survey'. I wish other authors could write in his lively, stimulating style. I met him at the Ironbridge conference in 1979, and I am now the proud possessor of his signature on the books. I have also greatly enjoyed the company of W.J. (Bill) Thompson over the years, and I will always remember sharing his company at the 1994 Conference Dinner on the gun deck of HMS Warrior. (See his obituary IA News No. 98). Another person I met at Keele was Fred Brook - again a northerner with an excellent sense of humour. Fred was not at Bangor, but perhaps we will meet at Conference in 1997.

A particular pleasure for me at the Bangor Conference was to see the Warwickshire Industrial Archaeology Society stand for the first time. It confirmed to others that we really do exist! The stand received many favourable comments. Many thanks to Mark Abbott for the preparation and transportation of the stand. I hope we will be able to repeat the effort at Newcastle, the venue for the 1997 Conference.

I will not give a detailed list of what happened at the Conference. This can be found in Henry Gunson's account in IA News No. 99 Winter 1996. I simply include some personal memories which I hope will convey the flavour of the Conference and the nature of the visits.

Saturday afternoon: Port Penrhyn and a walk up the track of the old quarry railway, ending at the former model village of Llandygai.

Sunday afternoon: Firstly the climb to Pen yr Orsedd quarry and its blondin cableways, with our guide Peredur Hughes conveying great enthusiasm and the qualities of a mountain goat in negotiating the inclines and tips. We then

travelled downhill past the flooded quarry of the former Dorethea and the Cornish engine of 1904.

Monday: Llandudno, with the Great Orme tramway and Great Orme copper mines in the morning, and an afternoon boat trip taking us under the Conway bridges to view the Telford (1826) and Stephenson (1848) masterpieces.

Tuesday: I chose to visit the (rather cramped and somewhat primitive) railway workshops of the Talylyn Railway at Tywyn Pendre, and in the afternoon the Barmouth railway viaduct across the Mawddach estuary. Luckily it was low tide and I was able to photograph and inspect the timber trestles which are now encased in glass-fibre reinforced concrete sleeves as protection from the sea and the teredo marine worm. A pleasant lunch at The George III at Penmaenpool, with its interesting wooden toll bridge dating from 1879. the visits of the day were concluded by a trip to the Glasdir copper mine.

Wednesday: The morning started at Porthmadog station on the Ffestiniog Railway with a journey to Blaenau Ffestiniog. This was slightly nostalgic for me, as I last travelled on the line in 1958 when it was only open to Tan y Bwlch. After lunch, we went downhill for a quick visit to Moelwyn fulling mill, and then on to Falcon D. Hildred's home/museum in Pant yr Ynn mill. He won the AIA Initiative Award for his guide to the Newport transporter Bridge, and his illustrations are superb. Well worth a visit. We ended the day at Pant yr Afon hydro-electric station, built in 1904 - and still in use - to supply Llechwedd quarry and the National Grid.

Thursday: Our last day consisted entirely of Anglesey, with our first stop at the Myndd Parys copper mine - at one stage the greatest copper mine in the world. I found it quite awesome with its great opencast pits and the varied hues of the rocks. Much of the ore was handled at Amlwch harbour, and this was our next port of call. We then moved on to the restored Melin Llunon windmill - open to the public, with a resident miller, and excellent refreshments. The day was completed at Holyhead Mountain Breakwater Quarry and Brickworks, now part of a Country Park.

For Valerie and I this ended the Conference, although some stayed on until Friday to have a strenuous day at Penmaenmawr and Penrhyn quarries. However, we did stay in Wales in the Newtown area and managed to photograph some concrete houses for Toby Cave! If you are interested in the area, the AIA guide to the Industrial Archaeology of North Wales is good value with a bibliography and historical introduction. If any members are interested in any particular subject, I do have some tour notes and would be very willing to help if I can."

John Selby

'The Warwick Waterhouses'

by John Brace

In 1693, a John Hopkins of Birmingham started an enterprise for supplying the inhabitants of Warwick with water from the Priory pools just to the North and east of the town. He converted an old mill to pump water to a 'waterhouse' which he had built on a plot of land measuring not more than 20 yards by 16 yards at the north end of Sheep street (now Northgate street) close by the modern traffic island.

The 'waterhouse' included a 'tank', or 'cisterns', that were filled from the pools with the houses being connected to the cistern by underground pipework. The works were substantially complete by 1694 as water taps are recorded amongst the losses suffered in the Great Fire of Warwick. Whether the new water supply was used for fire fighting is not known, but subsequently the 'Aldermen' of the town acquired the right to break into the pipes in case of fire. The street plan of Warwick dated 1711 shows the 'waterhouse' to be a substantial, probably stone, building but no other details have been found. Clearly the 'tank' or 'cistern' must have been above ground level if water was to reach the better houses in the highest parts of the town.

Finding that the 'engines' did not supply sufficient water, the original mills were demolished and new buildings and machinery installed about 1703. In the later part of the eighteenth century the enterprise was in the hands of the Valentine Cooks who had a new 'waterhouse' built about 100 metres to the east of the original site which is now part of the car park of the Punch Bowl public house. The second site is lower than the first and so the cistern must have been raised well above the ground to serve the highest parts of the town - truly a water tower but one of which we have no details.

The now redundant 'waterhouse', at the end of Sheep Street, was first converted into dwellings. However in 1774 - having been declared a 'public nuisance' - were purchased for £120 with the express intention of having them pulled down. Certainly the site was cleared by 1786.

In 1781 the water engine, and the corn mill that shared the same building, were declared to be in a 'very ruinous state so as not to admit repair'. The report continues to give the daily flow of water at the mill to be 2,700 hogsheads and perhaps twice that in winter. It also gives the head at 18 feet. Subsequently the Priory Mills were demolished to be replaced by new buildings and machinery - work that was in hand in 1782 and complete by 1784.

The 1802 undertaking was purchased by a Mr. Wise for £1800. The new proprietor does not appear to have made any substantial investment in the undertakings so that by 1849 they were again reported to be in poor condition with the mill ponds nearly choked by mud and rushes. The quality of the water was now also poor, being much polluted by excrement and refuse principally arising from 'The Cape'.

With sufficient water available, the engines could pump 3000 gallons per hour for 12 hours six days a week but the shortage of water in the town was such that the houses, at best, received water for only two days each week and it was not unknown for the water to fail completely in dry weather. Nevertheless some 80 houses and some public buildings in the town took water from this undertaking for which houses paid between 12 and 18 shillings per annum and the fire station £2.

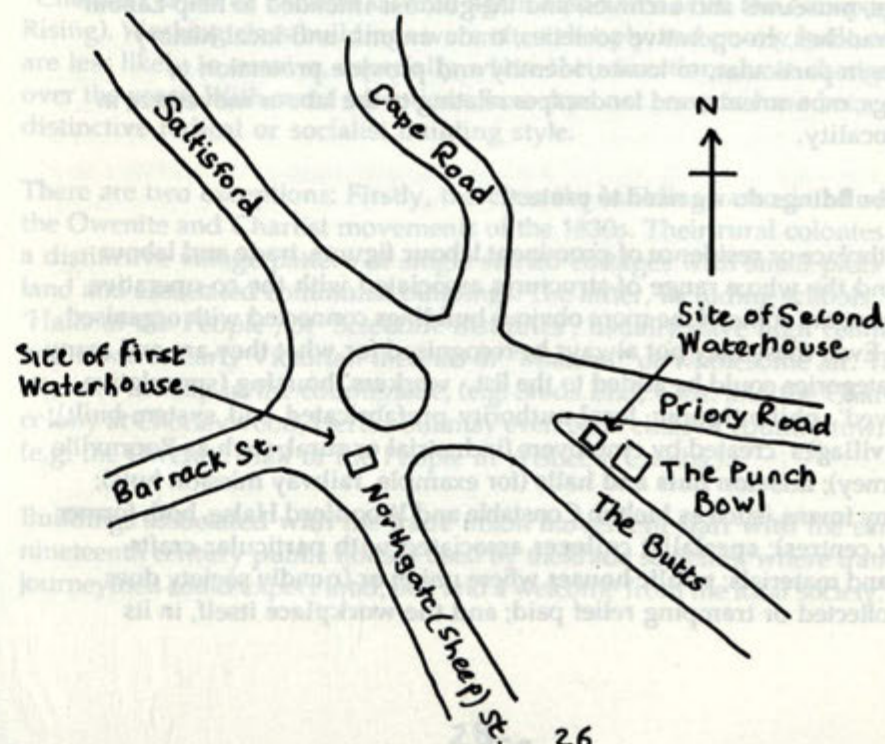
At this time, the service tank, or cistern, was reported to be lead-lined and to have a capacity of 9000 gallons. This tank has been reported to have been in Market Street but this may be mistaken for no evidence of such a location is found on the Public Health map of 1851 which continues to show the 'cistern' or 'waterhouse' at the top of The Butts.

Water continued to be pumped from the Priory Pools until 1858 when the new waterworks were opened at Emscote. However, some of the wooden water pipes continued in use for many years longer - and certainly some were still in use in 1876.

Sources

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5. Photograph of removal of wooden water pipes in Warwick. County Museum Archives
6. Map of 1711 by Messrs Fish and Bridgeman. WCRO
7. Map of 1786. WCRO
8. Map of 1806. WCRO
9. The Warwick Public Health maps of 1851. WCRO
10. The Haseley Water Supply. E. Pritchard 1876. Warwick Library Local History Pamphlet Section
11. The County Sites and Monuments Record. WA 2194
12. Corporation Minutes. 10 December 1844. WCRO CR 1618/W3/2
13. Warwick Advertiser. 27 March 1852
14. Private sources

Sketch Map showing the location of the Warwick Waterhouses



One of our members, Richard Storey, has brought to the editor's attention the following introduction to the landscape of labour history. I am sure many members will be in sympathy with the need to identify and protect these neglected aspects of our history. Warwickshire is not mentioned in the text, but members may well be aware of sites in the county that fit into the categories listed below. please let the editor know of any sites that might merit further investigation.

Where do you stand? The Landscape of Labour History

Introduction

In the past, conservation planners and architectural historians have concentrated on protecting buildings of artistic value or those associated with 'great men' and their achievements. Sites associated with the labour movement or the history of working people have been largely overlooked. This short guide has been prepared by the Archives and Resources Committee of the Society for the Study of Labour history with the assistance of English Heritage and the Ironbridge Institute. The Committee consists of representatives from the TUC, Co-operative Union, Labour Heritage, museums and archives; and the guide is intended to help Labour Party branches, co-operative societies, trade unions, and local history societies in particular, to locate, identify and provide protection to buildings, monuments, and landscapes relating to the labour movement in their locality.

Which buildings do we need to protect?

The birthplace or residence of prominent labour figures, trade and labour halls, and the whole range of structures associated with the co-operative movement, are some of the more obvious buildings connected with organised labour. Even these may not always be recognised for what they are and many other categories could be added to the list - **workers' housing** (speculative, 'improved', philanthropic, local authority prefabricated and system-built); **model villages** created by employers (industrial or rural, such as Bournville or Thorney); **mission huts and halls** (for example, railway mission huts); **company towns** (such as Melton Constable and Woodford Halse, both former railway centres); **specialist colleges** associated with particular crafts, trades and materials; **public houses** where union or friendly society dues were collected or tramping relief paid; and the **workplace** itself, in its

manifold forms, from chain-shop to cotton mill. Occasionally **church buildings** which have working class congregations have socialist decorations e.g. the magnificent apse paintings in St. Marks, Belgrave in Leicester, now at risk. In rural areas, some non-conformist chapels were strongholds of opposition to the farmers and landowners, and were actively involved in the early days of the farmworkers' unions. **Places of entertainment and recreation** such as sports facilities, cinemas, dance-, music-, and billiard-halls are also important and should not be overlooked. This list is far from an exhaustive one, but it serves as an indication of the potential scope of the issue raised by this article and the awareness it seeks to create.

However, some buildings hold a special significance for the labour movement and have become commemorative 'shrines'. These might include sites where groups of workers encountered the full weight of the law (e.g. Dorchester County Court where the Tolpuddle Martyrs were sentenced) or even felt the coercive arm of the state (e.g. the site of the Westgate Hotel in Newport, now marked by a large mural, where the Chartist rising of 1839 was crushed). Some shrines are located in buildings where working class pioneers met (e.g. Thomas Standfield's cottage at Tolpuddle) or even built themselves as the result of a dispute (e.g. Burston Strike School in Norfolk). Sometimes these shrines are difficult to locate and take on a mythical quality (e.g. the "Chartist" caves of Blaenau Gwent, again associated with the Newport Rising). Working class buildings were often cheaply and poorly built, and are less likely to survive, especially where their functions have changed over the years. With some exceptions there does not seem to have been any distinctive radical or socialist building style.

There are two exceptions. Firstly, there are the buildings associated with the Owenite and Chartist movements of the 1830s. Their rural colonies have a distinctive village pattern of single storied cottages with small plots of land and associated communal buildings. The latter, including schools, 'Halls of the People', or 'Scientific institutes', usually have high ceilings, a nod towards early Victorian theories of "Miasma" or wholesome air. These sites are usually in the countryside, (e.g. Snids End, Glos. and the Chartist colony at Chorleywood, Herts.) but may even be in cities or country towns (e.g. the Owenite Hall of the People in Wisbech, Cambs.).

Buildings associated with the trade union movement start with the early nineteenth century public houses used by the trade societies, where tramping journeymen could expect food, bed and a welcome from the local society.

Names normally give a clue to union connections, for example the Braziers Arms in Salford was the haunt of tinsmith workers. R.A. Leeson's book "Travelling Brothers" has a list of such public houses. By the mid-nineteenth century, trade unions, particularly skilled branches in urban areas, were building their own union halls or institutes. This tradition continues into the twentieth century. Sadly, few of these survive and there is a need for local research and preservation. One example is the Mechanics Institute building in Manchester. This was the birthplace of the TUC and is now shared by a conference centre and the National Museum of Labour History. The trade union movement generated other purpose-built structures such as libraries, hospitals, convalescent homes and institutes - a rich seam for local research.

The co-operative movement has its own 'shrine' in the Rochdale Pioneers Museum at Toad lane. It also created a whole host of buildings - shops, from urban grocers to vast department stores, pharmacies, offices, docks, farms, mills, factories, supermarkets and warehouses. The Co-op had its own architects' department who were responsible for distinguished buildings such as the recently listed Luma Lamp Factory near Glasgow built in 1939 in Art Nouveau style.

While most surviving and often unidentified buildings are in cities, examples are often to be found in country towns, rural areas, or on the coast. Socialist holiday camps or Clarion clubhouses associated with the socialist cycling movement are particularly under-researched.

For general information on labour movement please contact:

National Museum of Labour History,
103 Princes Street,
Manchester M1 3DD

Trade Union Congress Library,
Congress House,
Gt. Russell Street,
London WC1B 3LS

Co-operative Union Archives,
Holyoake House,
Hanover Street,
Manchester M60 0AS

The real Hawkesbury

Most members of the Society will know Hawkesbury Junction, and will have tried to capture the atmosphere of the meeting of the Oxford and Coventry canals on film. A £54 million scheme for housing, golf course, industry park and water attractions will alter the atmosphere for ever, and it is perhaps appropriate that a new book should be launched at this time that reveals the life and times of Hawkesbury in its heyday.

The book is:

'A Canal People: The Photographs of Robert Longden'

by Sonia Rolt.

Published by Sutton Publishing

Hardback £19.99

Sonia Rolt is, of course, the widow of L.T.C. Rolt, the writer and founder of the Inland Waterways Association. She had fallen in love with canal life as wartime trainee boatwoman, and had formed a friendship with photographer Robert Longden in the late 1940s and had been given a number of his pictures. Twenty-five years later, with the help of Coventry Canal expert Bert Dunkley, she made contact with his family still living in the city. Much of his work had already been lost, but there were two surviving boxes of glass negatives. Sonia Rolt spent many years preserving and preparing for publication what remained of his work. The glass negatives form the basis of the one hundred and forty photographs in the book, beautifully reproduced and marvellously evocative of a bygone era. The book contains many examples of industrial history, but the images also illustrate the intimacy of the canal communities.

Robert Longden, a master pattern toolmaker with Alfred Herbert, turned to photography in retirement. A small, self-effacing man, always neatly turned out in brown mackintosh, black beret and bicycle clips, he was a familiar figure on the towpaths with his Leica camera. Unobtrusive almost to a fault, he was nevertheless a stern perfectionist. His photographic skills were well known locally. He was president of Coventry's amateur photographic society and regularly won medals in society competitions. He died in 1957 at the age of seventy-eight.

The book is highly recommended - there is so much to see in each of the photographs.

Seen and Heard

- With all the controversy surrounding the **National Lottery**, it is good to see some industrial monuments receiving appropriate funding. The Heritage Lottery Fund has announced its largest award to date - a £25million grant to complete the restoration of the **Kennet and Avon Canal**.

The 87-mile canal links the Bristol and English channels via the rivers Thames, Kennet and Avon. Designed and engineered by John Rennie, it includes two magnificent (neo-classical style) aqueducts at Dundas and Avoncliff, and the extraordinary flight of 29 locks at Devizes carrying the canal up Caen hill. There are already some 160 listed buildings on the canal.

Most of the money will be spent on engineering, with nearly £10million devoted to strengthening and underpinning the earthen and clay embankments which carry large lengths of the canal above ground level. Nearly £8million will be spent on dredging, relining of the canal sides and refurbishing locks.

- Another beneficiary of Lottery money is probably much less well known. **The Royal Gunpowder Mills at Waltham Abbey in Essex** closed only in 1991 - having been founded in 1665. They have never been seen in public. In the woods on the site are 21 listed buildings. With the help of a £6.5million grant, it will become not a museum but "an interpreted industrial site".

- The Millenium Commission has granted £14.8 million to the **Huddersfield Narrow Canal** to repair and re-open the 3.25 mile Standedge Tunnel. The plan is to re-establish the link between the canal and the rest of the system

- **'Biggest Blot ... Greatest Eyesore on the Coventry Landscape'** There must be many candidates for this accolade, but sadly the Coventry Evening Telegraph of June 9th suggested that the remains of the Gasworks at Foleshill should carry the title. English Heritage are very keen that an "in-depth inspection" should take place before any scheme to knock down the old gasworks is approved, but the local paper did not seem very sympathetic to the cause.

- Progress continues on the plans for the £46 million refurbishment of the **Baltic Flour Mill** - the disused grain store that dominates the southern bank of the Tyne in Gateshead. It is to be converted into the largest contemporary visual arts gallery outside London. A new Millenium Bridge will also link the Centre with the vibrant Quayside quarter of Newcastle, itself created out of 1970s industrial dereliction.

- Recreational facilities perhaps stretch the meaning of industrial archaeology to the limit, but the **main grandstand at Warwick Racecourse** is certainly an important and well-known landmark in the town. Just 72 hours before Warwick District Council was expected to give approval for its demolition, English Heritage managed to make the nineteenth century grandstand a Grade II listed building. The plan had been to replace the grandstand with a new three-storey stand housing betting and corporate hospitality facilities.

- **New book information ...**

Civil Engineering Heritage:

West and West Central England - 2nd. edition

by Roger Cragg.

Paperbound 320pp.

This new edition covers the areas of Wales and the western part of Central England from Cheshire in the north to just south of Bristol. It has been revised and updated to provide a greater spread and depth of coverage. Roger will be well known to most of our members, and his intimate knowledge of our civil engineering heritage is used to telling effect in this volume.

It can be obtained from:

The Book Sales Department,

Thomas Telford services Ltd.,

1 Heron Quay,

London E14 4JD.

Price £12.50 plus £1.25 p&p.

- One industrial corner of Warwick has changed very significantly in recent years - the cluster of industrial activity that used to surround the canal on the **Emscote Road**. The Navigation Mill (later a pie factory) was demolished in 1996, to be replaced by housing; the remnants of the sign 'Emscote Old Wharf' disappeared in 1997 as the van and truck hire firm occupying the site re-organised its works; and in 1997 the old tramway sheds were demolished to make way for a much-debated supermarket scheme.

- surprising what you learn on a bowling green ...

P.C. "What do you know of that old railway coach on the right hand side of the road as you approach Armscote from the Halford direction?"

F.B. "Yes I know 'em well. In fact, a relation of mine lived in 'em for years."

P.C. "Are there more than one then?"

F.B. "Yes - there are two arranged as a "T". From the road you can't see the one at the back. I remember them being put there. I was still going to school at the time - it must have been about 1930. They came from Swindon. Mayo's - the timber hauliers of Shipston - brought them on a timber carriage drawn by a traction engine. I watched the chaps unload 'em. they cost £10 apiece."

P.C.: Peter Chater

F.B.: elderly fellow bowler from the Halford area.

Peter writes ... 'these coaches are rather secluded in a garden surrounded by shrubs. The roof is of Welsh slate. They are not necessarily ex-GWR coaches as there were many small railway companies which became part of GWR in 1921-1923.

- John Brace takes us into a secret corner of **Warwick Library**.

"There is a little-used corner of Warwick Library that holds the pamphlet collections and a curious collection of oversize books and periodicals that are part of the Local History Collection. The arrangement of the stock is uninviting and difficult to follow - there are boxes of large pamphlets; boxes of small pamphlets; items filed by place names; magazines filed by title; and other things filed by the normal Library Subject Catalogue. The card index is also out of date and the computer catalogue often inadequate. Despite all these difficulties, however, there are great rewards for those willing to persevere. There is something for everyone. I discovered magazines including ...

- The Cake and Cock Horse
- The Shakespeare Express - the magazine of the Stratford

and Broadway Railway Society

• Sheetlines - the magazine of the Charles Close Society concerned with Ordnance Survey maps - an excellent read. You could even discover how a lighthouse came to be placed on the Pennines (Vol 36 p28)! ... and articles on ...

- The banking collapse of Greenway, Smith and Greenway
- The development of Local Govt. in Leamington Spa

plus, of course, copies of **Retort!**

End of the Line?

Following last edition's announcement of the availability of a canal-based funeral, it is now the chance of rail enthusiasts to purchase a one-way ticket for their final journey.

Peace Burials, a Lancashire-based company, have decided to go into partnership with the Llangollen railway to draw deceased steam enthusiasts to their final resting place along one of the most scenic train routes in the British Isles.

This unique service will carry a coffin between Llangollen, Clwyd, and a new terminus at Carrog, eight miles away. A budget price of £25 will transport the coffin while mourners travel on the normal service train. But for between £3000 and £4000 the train can be pulled by a special black locomotive with four bars and two restaurants to service a wake for up to 200 mourners.

A hearse drawn by black-plumed horses could be on hand for the final few feet to the cemetery, where Carrog community council has given permission for railway fans from outside the Corwen valley to be buried. The alternative is returning to road for final removal to a churchyard anywhere in the country.

"There is no question of bad taste," commented Colin Keyse, commercial manager of the railway, "for coffins have been carried on trains in this country ever since the 1830s." Peace Burials added that burial was not the only option for steam fans. "We can arrange a cremation, with the deceased's ashes being scattered en route or alternatively put into the locomotive fire box."

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