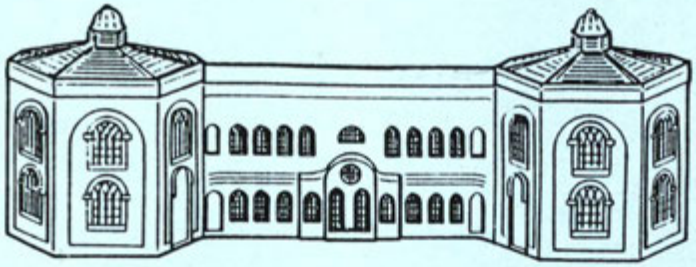
RETORT!

THE BULLETIN OF THE WARWICKSHIRE INDUSTRIAL ARCHAEOLOGY SOCIETY



SUMMER 1993 ISSUE TWO

RETORT! The Quarterly Bulletin of
Warwickshire Industrial Archaeology Society

ISSUE NUMBER TWO
SUMMER 1993

EDITORIAL

I did not believe them when they said that the second issue would be more difficult to produce than the first! Full of good intentions, I began to gather material soon after the first issue of **Retort!**, but a combination of technical and editorial difficulties produced a series of unanticipated delays. It will not have escaped your notice that summer has now passed, and may even be a distant memory, but I have been brave enough to call this the Summer 1993 edition in the hope that the "quarterly" aspect of our title can be maintained!
A great deal has happened in the months since the last edition, with a busy programme of meetings , visits and walks. There has also been a major initiative by the Association for Industrial Archaeology to improve the recording of industrial sites. This will be the subject of a "special" Autumn edition of **Retort!**.
As you will see from the contents of this edition, several members have kindly submitted articles, and I am extremely grateful to all concerned. Perhaps the winter months will encourage others to do likewise.
Our membership grows - but only slowly - and should you know of any potential candidates for membership, do please pass their names to Mark Abbott, our treasurer and membership secretary. We have tried to spread the word into the "far north" of the county, with talks on Atherstone and Nuneaton; walks at Rugby and Newbold-on-Avon; and a stand at the Local History Fair at Rugby. It would be good to increase our membership from that part of the county. Perhaps we should hold one meeting a year in that area?
A final word - one member actually reported that he liked the title **Retort!**, and others were too polite to pass comment, so the name stays!

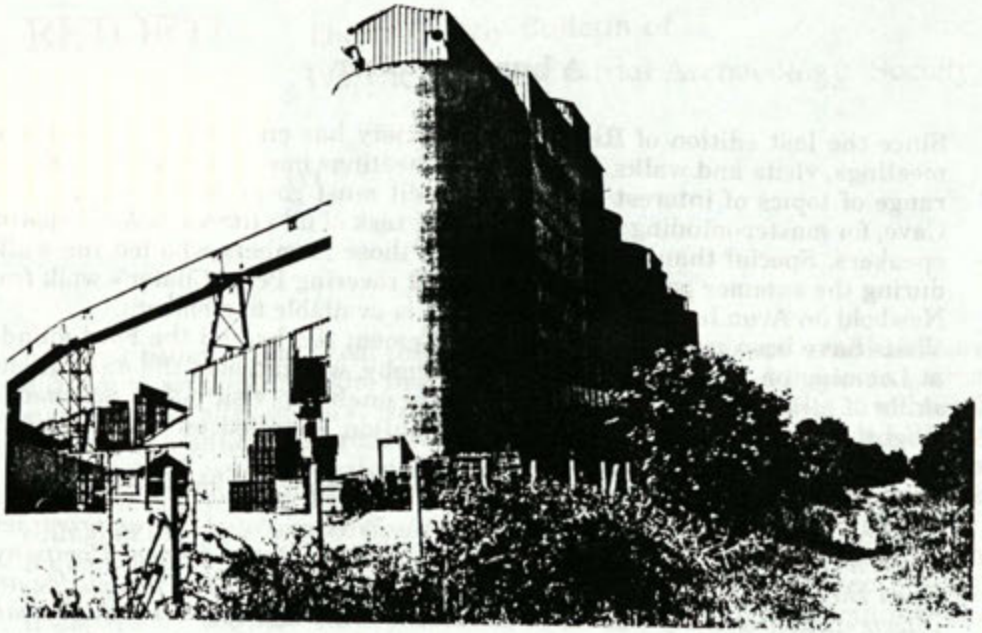
Martin Green

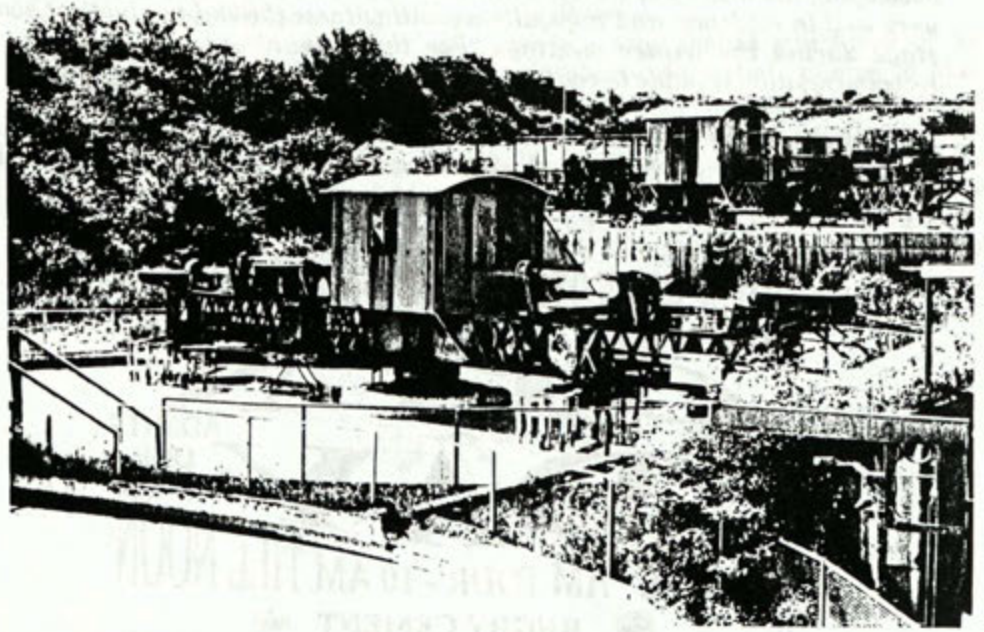
A busy summer

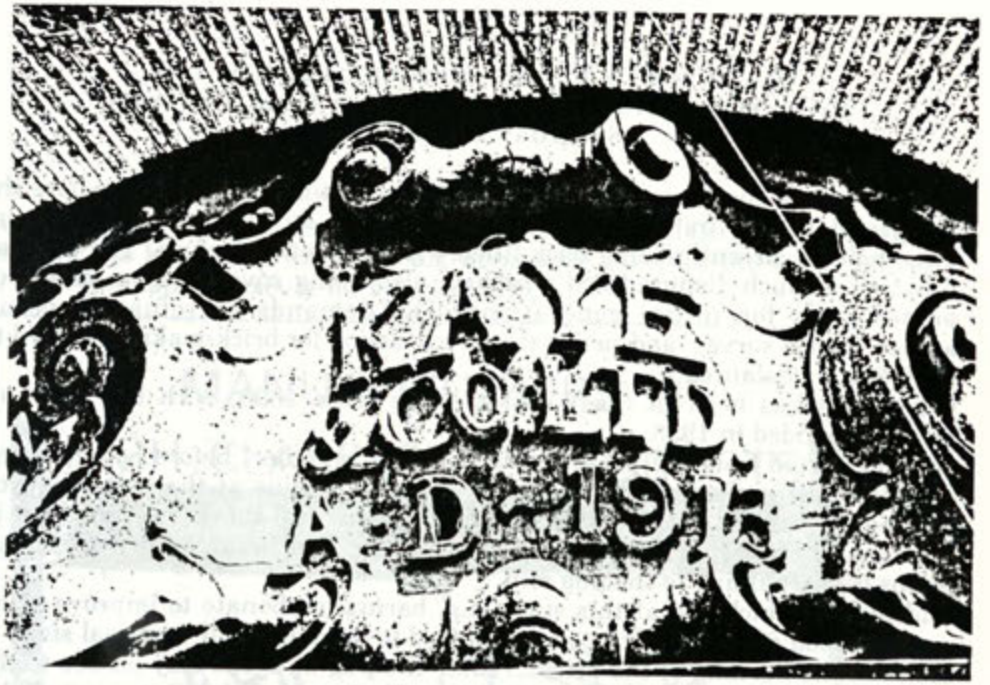
Since the last edition of **Retort!**, the Society has engaged in a number of meetings, visits and walks. The series of meetings has continued to produce a range of topics of interest to all, and credit must go to the Chairman, Toby Cave, for master-minding the most difficult task of all - the selection of visiting speakers. Special thanks must also go to those members who led the walks during the summer period. A small booklet covering Peter Chater's walk from Newbold on Avon has been produced, and is available to members.
Visits have been made to the Southam Cement Works and the Ford foundry at Leamington, plus a tour of the IA of Rugby, which tested the navigational skills of all concerned. Members who were unable to visit either Southam or Rugby might wish to know that information supplied on those visits is available via Martin Green.
Some reflections on the Southam visit have been supplied for publication:

"The chimney at the Southam Cement Works is one of the most prominent modern industrial landmarks of the area, and the Rugby Cement Company's Open Day on was a real chance for members to improve their knowledge and interpretation of the processes at work. The estimated tour time was greatly exceeded by all those members who visited the works, and most included a visit to the quarry as well. Our Treasurer managed to get lost in the bowels of the Filter Press Building, but the Chairman built up some very useful contacts in developing his history of the cement industry in Warwickshire. Photographers were well in evidence, and hopefully we will witness the end-products at some stage during the winter meetings. For those unable to attend, a strong recommendation is made to visit the Open Day next year."

Some photographs are also included. The technical difficulty of photo-copying photographs has proved a real stumbing block for this edition, and the production team apologises for any reduction in quality.






A.D. 19

WIAS Visit To Webster Hemmings & Sons Ltd.,
Brick Manufacturers, Stoney Stanton Road, Coventry.
Saturday 15 May 1993

The visit commenced on the rim of the pit (at one time 140 ft deep) where the Keuper Marl was first dug in 1870. Extraction is still taking place, but the huge hole is currently being back-filled with Coventry's refuse. The pit also contains a much-disputed SSI which is also being covered as a means of preservation for future generations. The demands of refuse disposal, archaeological survey, and raw-material extraction for brick-making seemed to be delicately balanced.

Ownership has been in the Webster name since 1896, with the name of Hemming added in 1938.

Once extracted from the pit, the clay is left to "weather" before being loaded onto the mill conveyor belt. A curtain of heavy chains at the belt conveyor loading bin ensures that the tipping by the mechanical shovel is evened out in the feed to the Kibbler roller pan. This latter pan breaks down the large lumps before passing to the pug mill.

Additives are included at this stage (e.g. barium carbonate to improve brick quality; wood pulp to reduce power required to drive the mill; and coal slack to assist in the burning of the bricks.) After the pug mill, the clay passes to the brick-making shed. It was here that our Chairman, Toby Cave, noted the unusual "Belfast" roof trusses. In this shed, modern machinery produces extruded bricks, with ingenious wire-cutting machines producing bricks of the required size. The machine also produces the rusticated effect via a dragging action across the face of the brick.

After being loaded automatically on the pallets, the green bricks are then transferred on an old rail-car system driven by 220 DC to a bank of drying ovens (heated by paraffin fuel.) Each chamber takes between 5,000 and 6,000 green bricks and the drying takes place over 3 to 4 days at 180 degrees F.

The final process involves the firing of the bricks in the Hoffman Kiln. This was rebuilt in 1950. The 18-chamber kiln has a two-week cycle of setting, firing, cooling and drawing. With a light oil fuel, a temperature of 1020 degrees F. is reached in the firing stage.

We finished the tour by looking into the working pit, noting how the developments in hydraulic excavators had removed the necessity of blasting out the hard lower layers of clay.

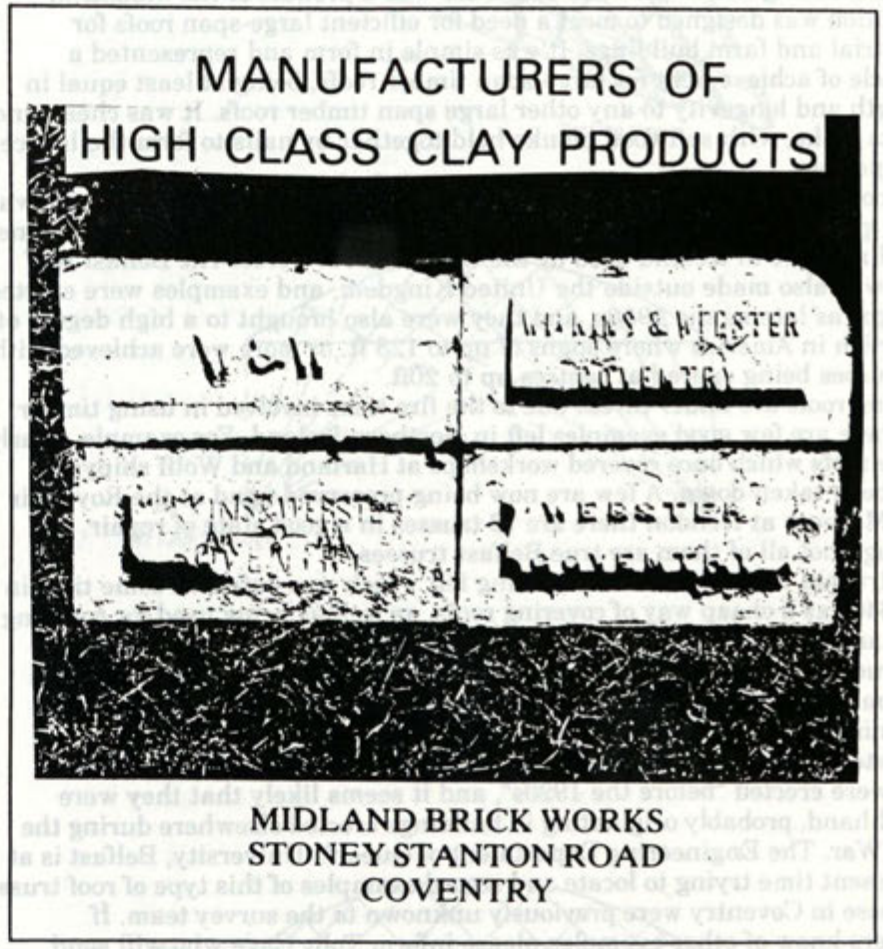
This was an excellent visit, with a good attendance by members, and a thoroughly entertaining and informative tour given by our guide, Mr. Hall

We are grateful to the company for allowing us to visit the site. We hope the brickworks continues to survive in what must be very difficult times. It was a pleasure to see a small brickworks producing for a specialised brick market.

E & O E

John Selby

A few samples of the products of this brickyard from the collection of one of our members. No black and white photographs were taken of the works during the visit - perhaps an excuse for a second visit?!



MIDLAND BRICK WORKS
STONEY STANTON ROAD
COVENTRY

Thoughts on Belfast Roof Trusses

The members who visited the Midland Brickworks in Coventry on May 15th. will have noticed one of the buildings roofed with a fine series of Belfast Roof trusses. The curved bow-shaped roofs are typical of this type of roof truss developed in Belfast as early as 1866 as a "durable, cheap and handsome roof for felt which is now so much used for covering mills, factories, farm buildings, etc.". Roofs could be made to a clear span ranging from 20 ft. to 100 ft., which was particularly useful for the construction of both airship a and aeroplane hangers during the Great War. The truss was a product of the industrial revolution was designed to meet a need for efficient large-span roofs for industrial and farm buildings. It was simple in form and represented a pinnacle of achievement for large-span timber roofs, being at least equal in strength and longevity to any other large span timber roofs. It was cheap and easy to make, with softwood planks held together by nails to form the lattice-work pattern.

The roof was widely used throughout the British Isles. the last major use was in the general purpose hangers built at many airfields during world War One, including some in Ireland used by the US Naval Air Force. The Belfast roof truss was also made outside the United Kingdom, and examples were erected in Lagos as late as the 1950s, and they were also brought to a high degree of perfection in America where spans of up to 125 ft. or more were achieved with the trusses being spaced at centres up to 20ft.

Existing roofs are under threat due to the fire risks involved in using timber, and there are few good examples left in Northern Ireland. For example, nearly all the roofs which once covered workshops at Harland and Wolff shipyard have been taken down. A few are now being preserved , and at the Royal air force Museum at Hendon there are 72 trusses in a good state of repair, although not all of them are true Belfast trusses.

Most trusses were covered with roofing felt which was patented some time in the 1840s as a cheap way of covering roofs, as well as being used for covering floors and sheathing ships. Whereas large numbers of these roofs were constructed, many have been taken down, so it is important that historical information should be collected and that some of the most important remaining structures be preserved.

The date the trusses were erected at the Midland Brickworks is not clear. They were erected "before the 1920s", and it seems likely that they were second-hand, probably originating in buildings erected elsewhere during the Great War. The Engineering Department of Queen's University, Belfast is at the present time trying to locate and record examples of this type of roof truss and those in Coventry were previously unknown to the survey team. If members know of other examples please inform Toby Cave who will send details to Professor A. Jennings at Queen's University. Details such as location, O.S. Map or other reference, possible date, span of trusses, etc., would all be most useful.

Lyndon F. Cave

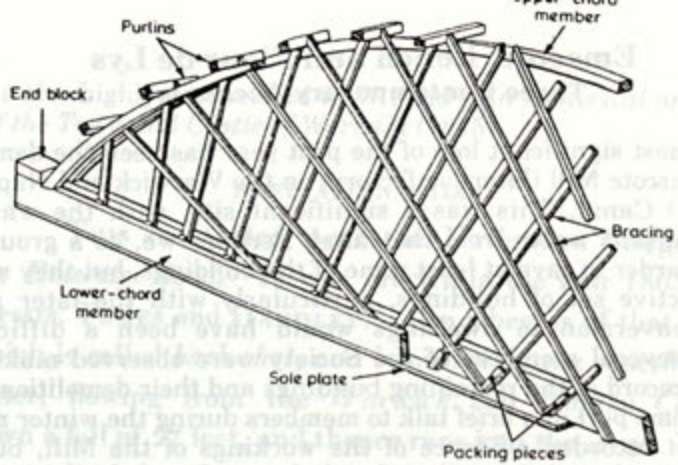
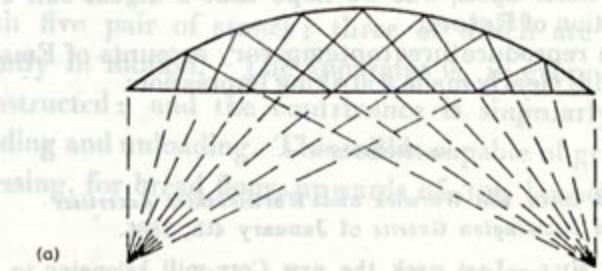


Fig 1. Cut-away view of a Belfast truss



(a) *McTear's design*

(b) *Anderson design*

(c) *The 'modern' Belfast truss*

(d) *Conventional bow-string truss*

Emscote, Kench and Fleur de Lys
Three Contemporary Accounts

Perhaps the most significant loss of the past year has been the demolition of the former Emscote Mill (later pie factory) on the Warwick and Napton (later Grand Union) Canal. This was a significant site, with the water-wheel powered by surplus water from the canal. Perhaps we, as a group, should have fought harder to save at least some of the buildings, but they were not a notably attractive set of buildings, particularly with the later additions. Successful conversion to dwellings would have been a difficult task. Fortunately, several members of the Society were observed making a full photographic record of the remaining buildings and their demolition. Perhaps this could become part of a brief talk to members during the winter months.
There is scant recorded evidence of the workings of the Mill, but Mr. D. Rishworth, a member of the milling family later to operate the Emscote and Rock Mills, has generously made available a collection of documents that may help to improve knowledge of the mill's early history. These documents will take some time to work upon, but we hope that a digest can eventually appear in a later edition of **Retort!**
For the moment, we reproduce three contemporary accounts of Emscote Mill. The opening of the Mill clearly made a striking impression:

Reprinted from the *Warwick and Warwickshire Advertiser and Leamington Gazette* of January 4th, 1806.

THE NEW MILL.—Last week the new Corn-mill belonging to Messrs. Tomes and Handley, erected on the side of the Warwick and Napton Canal, near the town, began to work in the presence of many respectable millers and mechanics, who expressed the highest satisfaction at the complete manner in which it went off. This mill is constructed to be worked by a small quantity of superfluous water from the canal, and has power to drive five pair of stones with suitable machinery, grinding and dressing 500 sacks of flour, weekly; and promises to be productive of a considerable increase of trade both upon the canal and to the market.—The great water-wheel is 24 feet in diameter and 7 feet wide, the pit-wheel 14 feet diameter, the spur wheel 12, and the crown-wheel 14. The shaft and wheels are of iron, and to such perfection is the art of iron-casting now arrived, that the great wheel is no heavier than one constructed of wood of the same dimensions.—The works, we understand, were executed by Mr. Roberts, millwright, of Warwick, whose ingenuity, care and attention, has been such as to entitle him to much praise. It is with considerable pleasure we observe that cast iron can, with so much effect, be applied to those purposes in mills, that have heretofore consumed such large quantities of the best oak in the kingdom, and which may be appropriated to ship-building and other useful purposes.

The Mill is also highly commended in W.Field's *An Historical and Descriptive Account of the Town and Castle of Warwick* (1815)

NAVIGATION MILL.

THIS is situated near the Navigation Bridge, on the *Emscote Road.* It was erected in the year 1805, by Messrs. TOMES and HANDLEY. The wheel is of that kind which is called *back-shot,* and is turned by the superfluous water, flowing from the *Warwick* and *Napton Canal,* down a fall of 27 feet, and thence runs into the *Avon.* This great wheel is of cast iron and excellent construction, which does credit to the maker, Mr. ROBERTS, of *Warwick;* measuring in diameter 24 feet. The mill is furnished with five pair of stones; three of which are kept constantly in motion. The apparatus is, in every part, well constructed: and the contrivance is singularly good for loading and unloading. This mill is capable of grinding and dressing, for bread flour, upwards of 300 bushels per day.

The mill was subject to two periods of rebuilding - one in 1885 and another in 1905.

. . . THE . . .

Warwick Flour Mills.

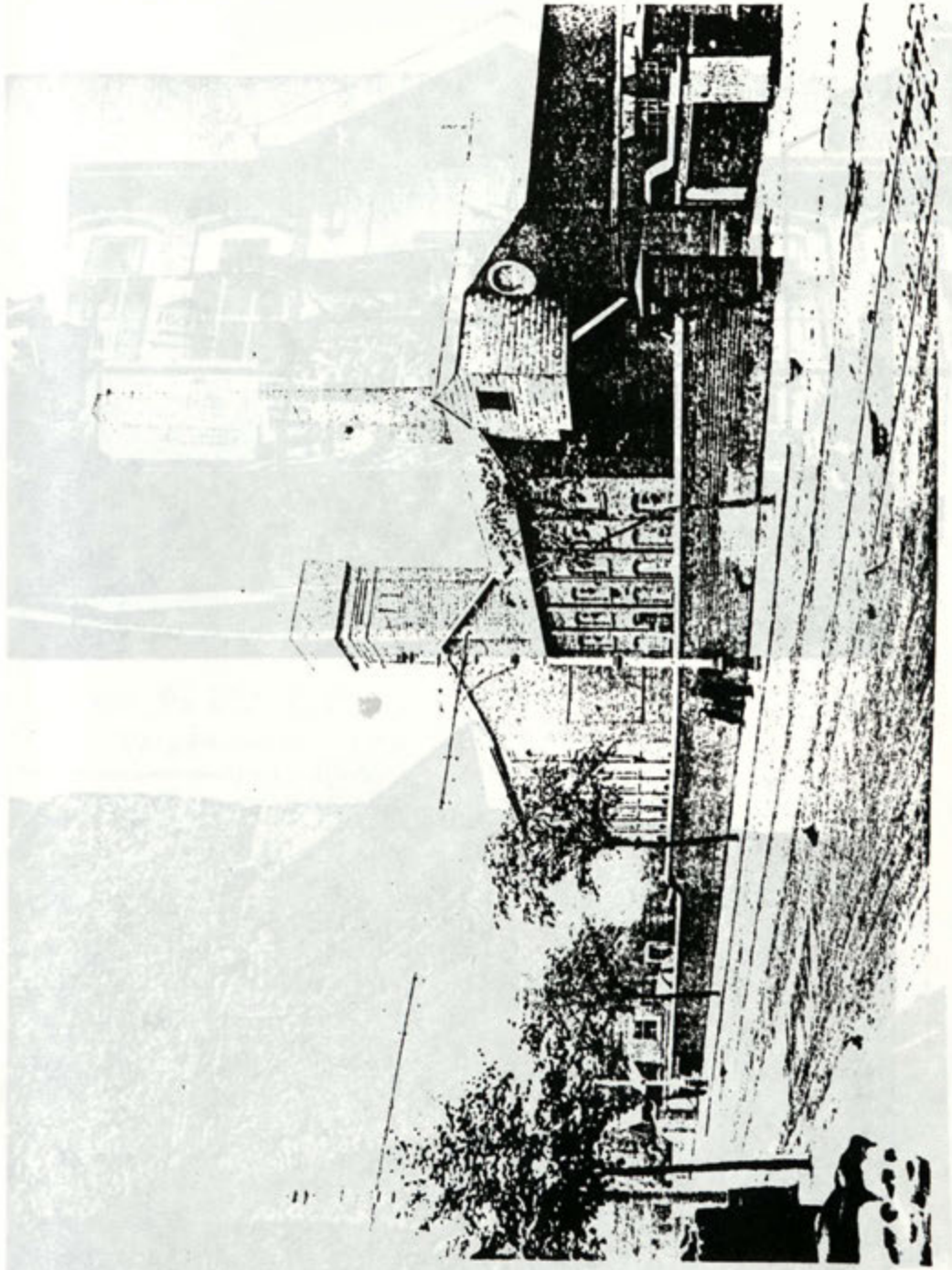
Reprinted from the *Warwick and Warwickshire Advertiser and Leamington Gazette* of June 3rd, 1905.

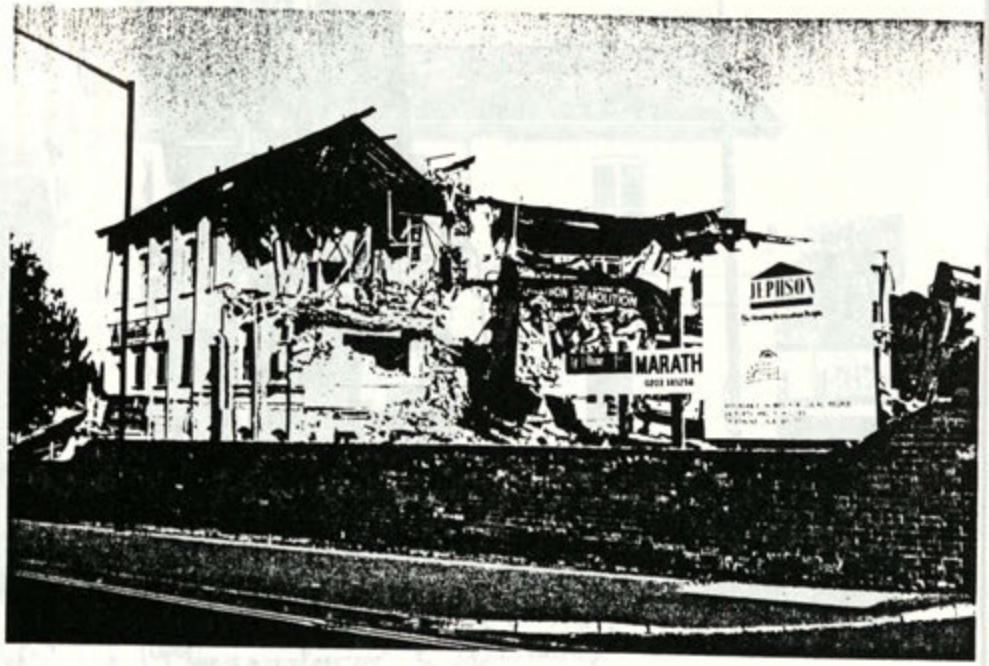
Extensive alterations and additions have lately been carried out at the Emscote Flour Mills—the opening of which "in the presence of many respectable millers and mechanics" was recorded in the first issue of the *Warwick Advertiser* in January, 1806. In order to meet modern requirements, and to obtain greater comfort and convenience, Messrs. Kench and Son have erected a large additional block of buildings which enables the machinery to be separated from the sacks of corn, etc., stored in

the older portion of the premises, and by letting daylight into the works should tend to considerably increase the efficiency of the "Mid-England Flour Mills." Mr. Sheldon Kench gave our representative the opportunity the other day of looking over the Mill premises, and the visit proved exceptionally interesting, showing, as it did, what great changes have taken place in the milling industry during the past 100 years. Not the least surprising fact about the Emscote mills is that notwithstanding the great alterations which were effected in 1885 and again during the past year, a few portions of the original fittings still remain in daily use. For instance, the great cast-iron water wheel, 21ft. in diameter and 7ft wide, which the writer in the year 1806 spoke of as being "no heavier than one constructed of wood of the same dimensions" still pursues its daily round, fed by water from the Warwick and Napton Canal, and the heavy wooden shafting which was used to hoist sacks from the canal boats can still be seen performing the same operation on any day of the week. When one has said this, however, one has said all, so far as the working of the mill is concerned, for both as to the grinding machinery and motive power used for the same there is a world of difference compared with what the "respectable millers and mechanics" witnessed in 1806. Many of the large fluted stones which were employed to crush corn up to 20 years ago are now used to pave the stable-yard, and the motive power which drives the complicated machinery is derived from a 100-h.p. steam engine. So different are the requirements of the present day that wheat which used to be dealt with by three machines now has to run the gauntlet of about 30. The great change from stone to chilled-iron rollers was made in 1885 by Messrs. Lampitt and Son, Ltd., but, since then, wear and tear, combined with a dark and unsuitable building, made it necessary to re-arrange the plant, and by the advice of Messrs. Briddon and Fowler, milling engineers, of Manchester and Banbury, Messrs. Kench and Son decided to erect a new building with high-light floors, to part with some of the old machines, move the remainder to join some new ones, and re-arrange the whole according to the latest system. This has now been done, and though it involves the loss of a great part of the old building, it has produced such good results, in the shape of comfort and daylight, as must be an advantage in the conducting of the business. In fact, looking at the old mill now, one wonders how the work could have been carried on previously at all. A detailed account was given in 1885 of the chilled-iron roller system (which still prevails), but it may be

said of the flour produced under the new process that it is thirty times purified; indeed, human ingenuity seems to have striven to the utmost to ensure that every element of impurity shall be removed from the "staff of life" consumed at the present day. On account of scarcity, only one-tenth of the wheat ground at the Mid-England Flour Mills is grown in England, and it is only fair to say that the character of the home-grown wheat would scarcely require some of the precautions which have to be taken in regard to that of foreign origin. Most of the wheat milled at Emscote comes from India, Russia, Canada, South America, and Australia, and it is largely owing to the methods of harvesting adopted in those countries that the English miller has to be specially careful in winnowing the corn. A considerable amount of barley grows with the Indian wheat, and to remove this there is a specially-devised machine which removes everything of different size to the wheat. The wheat is then thoroughly washed and brushed, and after passing under a number of powerful magnets which attract certain stray bits of metal that would otherwise pass on and injure the silk through which the flour has to pass, the wheat goes on to the fluted rollers which break it down. Various processes of separation, grading, and purification follow, and to remove all the fibrous substances attaching to the grains of crushed wheat an air current is drawn through a silk sieve. After passing through the smooth rollers which grind the flour, the latter is sent on to a centrifugal dressing machine, where revolving beaters drive the flour through silk gauze. Much is said in these days on the subject of "White" *versus* "Wholemeal" bread, but there is little doubt that the advocate of the latter would prefer not to eat much of the material that is extracted in the production of white flour if they examined it. Also a sure guide in such matters can be found in the fact that those who work hard with their muscles are not found eating bread with bran in it, though those leading sedentary lives may find it more useful than palatable, unless well buttered or otherwise assisted. It should be stated that very elaborate precautions have been taken to guard against fire in the mill premises. It seems that air charged with a certain proportion of flour dust is as explosive as gas; and the mills are therefore subjected to a higher rate of premium by the insurance companies unless very elaborate steps are taken to guard against fire. Every 10 square feet, therefore, is covered by a patent water sprinkler, the idea being that should a fire break out the heat would melt the solder and let the water fly out. Should this happen a fire-gong would be set going which would give the alarm. Mr. F. P. Trepass is the architect of the new buildings, which were built by Messrs. J. H. Cashmore and Sons. Messrs. Plucknett and Sons will install the electric light fittings, which will take current from the public supply to commence with.

PRINTED BY EVANS AND CO., "ADVERTISER" OFFICE, WARWICK.

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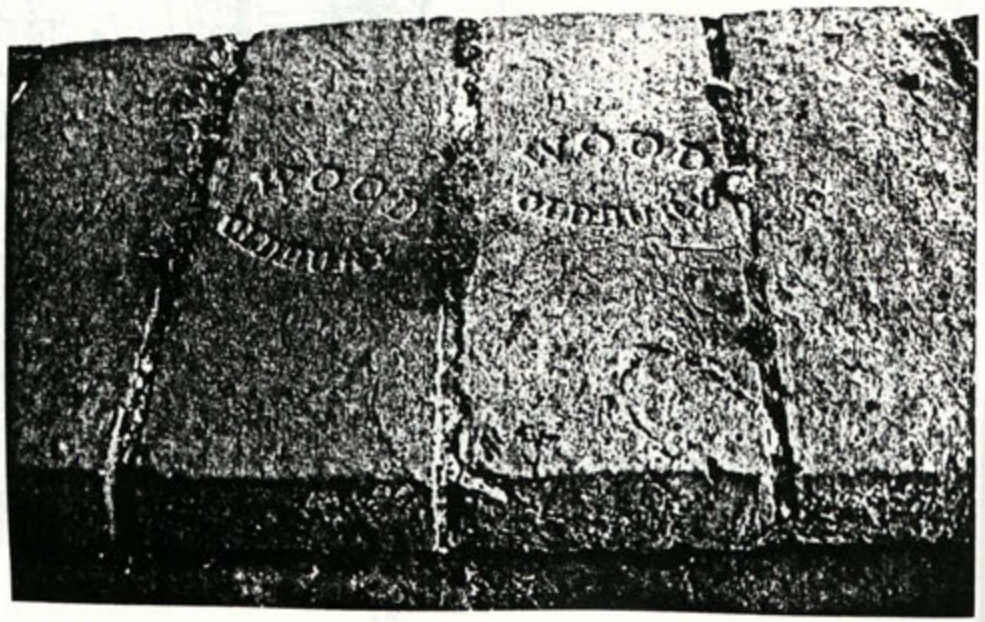

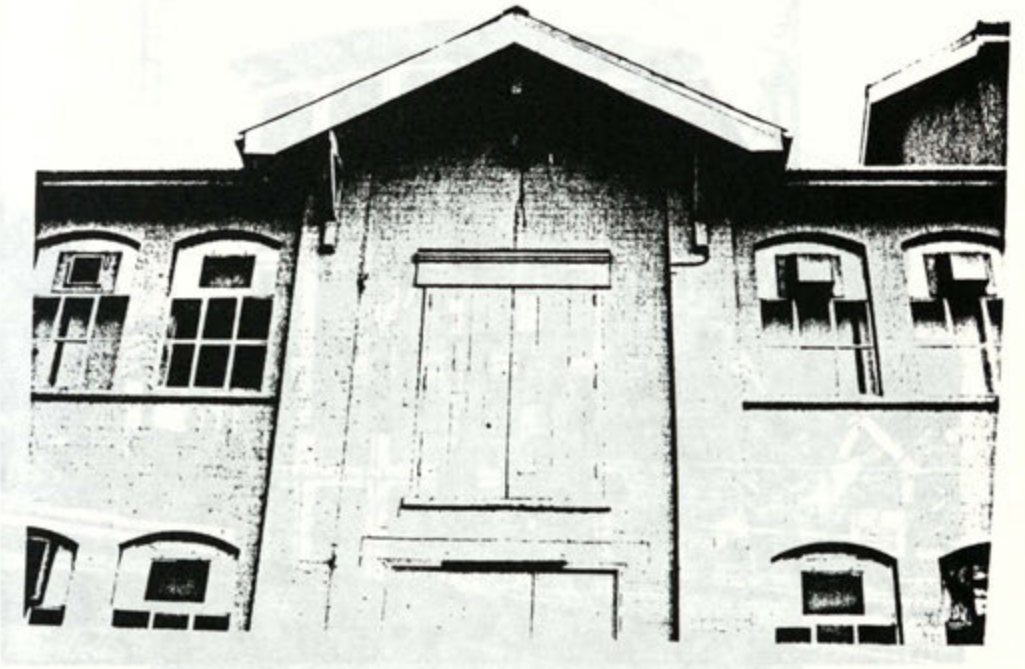

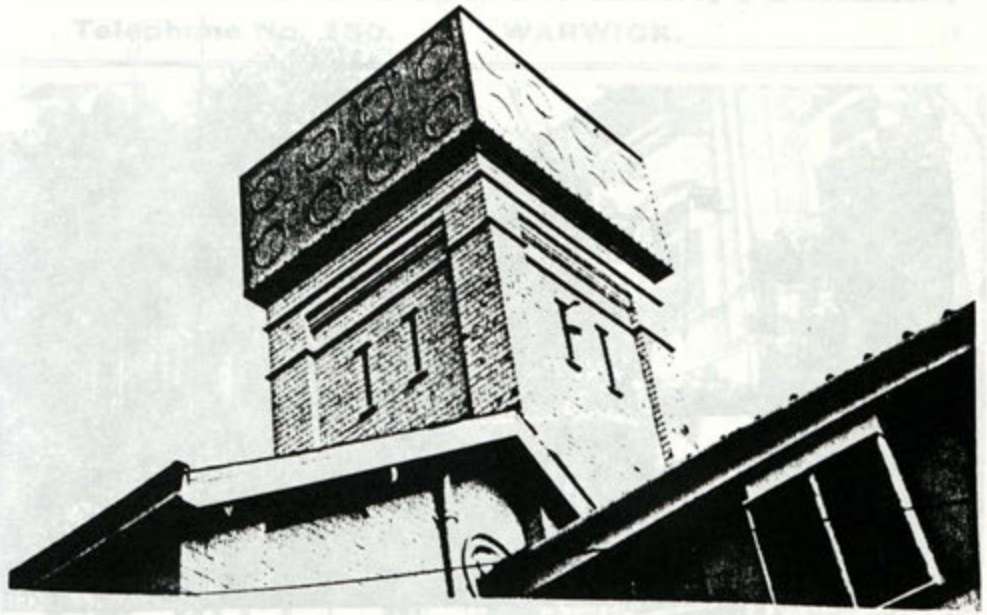

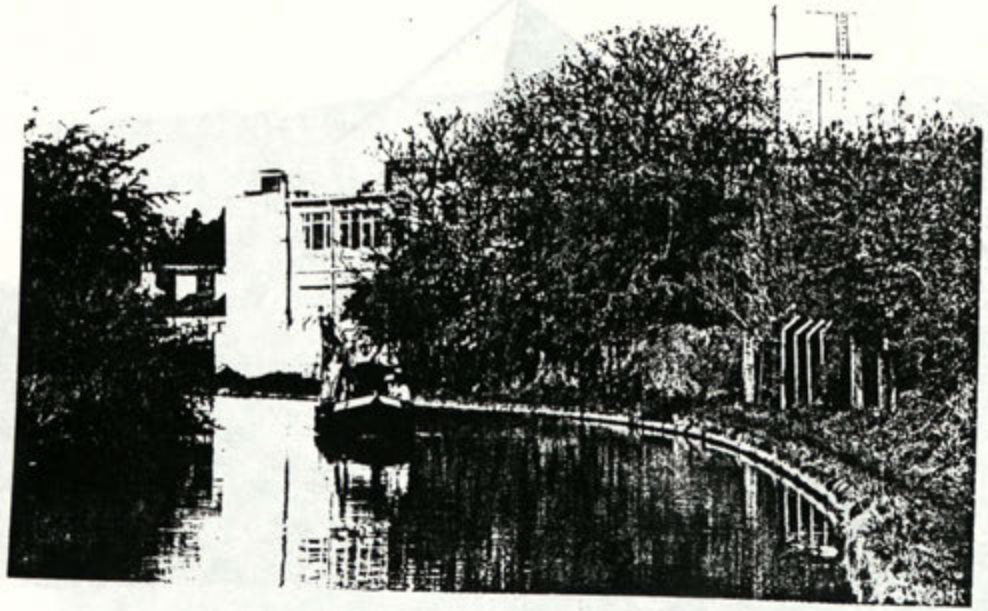

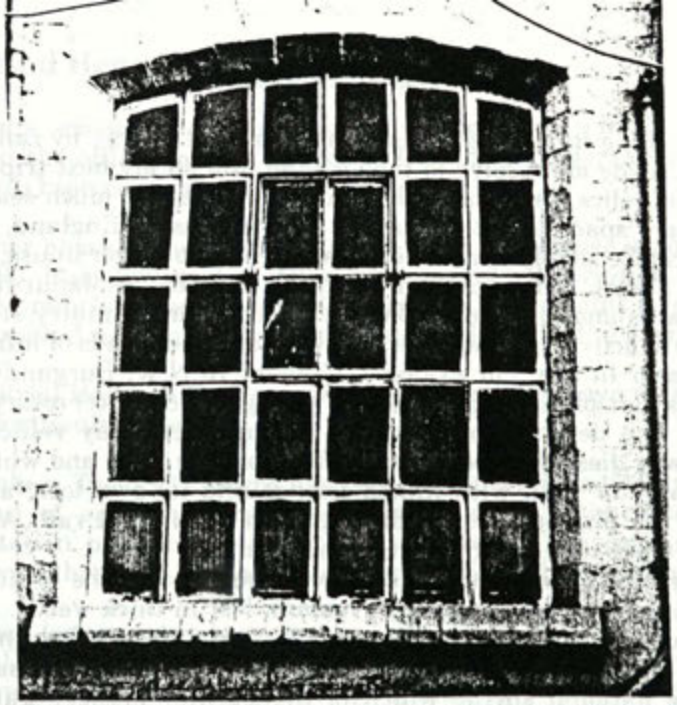

From **KENCH & SON, LTD., MILLERS,**

Telephone No. 150. **WARWICK.** *19*

Across the Channel

Travelling in France this summer (as most years), by rail, bus, cycle and on foot, made me resolve to take a slide film on my next trip, to capture the industrial relics which can still be found without too much searching in a country where space is not at such a premium as in England, and where equipment can be simply abandoned in situ when no longer in use.

The French railway system might be described as Janur-like, looking both backwards and forwards: TGVs on the one hand, country stations with some degree of activity on the other, surrounded by all kinds of infrastructure, much no longer in use. For example, Cravant in N.W. Burgundy, linked to Auxerre, has four platforms; two sets of sidings; a (defunct) rotary crane and goods shed; two derelict goods trucks; a permanent way vehicle and two permanent way diesel locomotives in a fresh orange, blue and white livery; a nearby granary or mill, with linked sidings and its own loco; and lighting columns on the platforms made of lengths of redundant rail. All this in a village with fewer than one thousand inhabitants!

Near Varennes, in the same area, the lines to the military camps, with overbridges and warning signs, remain, lost in thick weeds. At Etaples, south of Boulogne, a large straddle crane sits on a deserted siding. Between Vernon and Giverny the course of a former railway makes a pleasant footpath towards the national shrine which is the painter Monet's garden. Near Vernon, stone embanking walls are still in place, whilst towards Giverny, some wooden sleepers have been left in the track-bed, at least two with metal bolts in place.

For those interested in machinery, front gardens in the countryside are a good place to see ploughs and similar items, which are obviously highly prized as status symbols (but watch out for the ubiquitous chiens mechants, not always confined). Old lorries and fire appliances are often left on the farms or in the villages where they expired, although there is a growing vintage commercial vehicle movement in France, with an excellent monthly, *"Charge Utile" (Payload)* available on station bookstalls.

However, change does occur: the railed crane for unloading Boulogne'S trawlers no longer sits on the popular quayside as it did when we first visited in the early 1980s. In the same decade the "inland" part of Calais still contained impressive blocks of former lace factories, some of which may still survive, and the excellent museum and art gallery included relevant exhibits and sold a substantial brochure on the industry. This year, a casual visit to the information office in Chablis revealed a superbly restored and presented wooden grape press in the grounds of the building.

As a conclusion to these random notes, the conversion of the Mosse-Bossut factory at Roubaix into a centre for business archives of the Nord-Pas de Calais is worth recording. "Le monde du travail", with facilities on a large scale, is a result of central government decisions taken in the early 1980s. Substantial groups of business and technical archives have already been collected at the Roubaix repository.

Richard Storey

Seen and Heard.....

* The new scheme to convert Coventry's Canal Basin in the City Centre has received the official nod of approval. Get those cameras working before too much has been changed.

* Another phase in the Rock Mill saga - Rock Mill House is now up for sale for £165,000. Rumour has it that the estate agent's description of the need for a complete refurbishment is indeed accurate, but it remains a very fine building, with a special significance in the industrial history of the town.

* Industrial Heritage Year seems to be racing past - have we made the most of the opportunities offered?

* "Members Twenty" - there has been a request for a twenty minute spell at the end of each meeting to give members a chance to make a brief presentation, or to show a few (non-slate) slides. This seems to be a good idea - I do hope there will be a sufficient supply of members willing to fill the slot.

*An open letter to members.....
James Douet of English Heritage has written to request information about the remaining Water and Sewage Pumping Stations of Warwickshire. You will see from the list that several of these lie outside our boundaries - would anyone like to volunteer to check the list?

Goldhorn Hill, Wolverhampton; 1850
Nuneaton; 1892
Mill Lane, Mill Road, Rugby; 1863
Whittleford, Nuneaton;
Costard, Holyhead Road; 1857
Edgbaston; Works Road, Birmingham; 1862
Whitacre, Sutton Coldfield; 1884
Whitley; London road, Birmingham;
Bratch, Wolverhampton; 1895
Princes Drive, Leamington Spa; 1871
Nether Whitacre, Sutton Coldfield
Selly Oak, Birmingham; 1881
Meir, Coventry; 1866
Polesworth; 1901
Longbridge, Bristol Road South, Birmingham; 1880
Tettenhall, Regis Road; 1845
Watery Road, Coventry;

I think we can all spot one that has disappeared...

* Attention - perhaps for the wrong reasons - has focused on the track-bed of the old Leamington to Rugby railway line. This has been occupied in the Offchurch area by a New Age of Traveller, and has raised many delicate issues concerning the use of the abandoned line. Sustrans - a cycle path group- would dearly like to convert the route for the use of pedestrians and cyclists at some stage in the future.

* As you may be able to notice at meetings, the Society's display material is improving, with John Selby's work on the brick kiln at Fenny Compton taking centre-stage. We still feel we need more material. Any ideas gratefully received. Perhaps the Society should invest in some permanent display boards, although these are notoriously expensive. An item for discussion at the AGM...

* Richard Storey - one of the contributors to this issue - has also written an article for the latest issue of the Bulletin of the Warwickshire Local History Society on "A Kenilworth Engineering Firm". This examines aspects of the work of Wrays (Engineers) Ltd. of Kenilworth. Richard also makes reference in a footnote to the forthcoming book, *Kenilworth's Engineering Age,* by Robin Leach.

* As reported in the last issue, English Heritage, through the Monuments Protection Programme, is continuing its survey of industries. The latest to arrive is The Glass Industry - Step 1 Report by David Crossley. As one would expect, reference to Warwickshire is very limited, with mention of the site of a 17th century glass furnace in Ashow, with details summarised in the SMR entry.

* The familiar gasholder at Foleshill, Coventry may soon be lost under a scheme for re-development. We must ensure that we have a good photographic record of this particular style of gasholder which has long been a local landmark.

Future Meetings

Thursday October 14th. Alan Cook will speak on **"Coal Mining in the Nuneaton Area"** at 7.30 p.m. in the Warwick School Junior Drama Hall.

Saturday October 16th. Visit to the **Rugby Works of the Rugby Cement Company.** Details can be obtained from Toby Cave.

Thursday November 11th. Geoffrey Starmer will give an illustrated talk on**"The WarwickshireCement Industry."** Mr. Starmer, as well as being an expert on the cement industry, is also Secretary of the Northamptonshire Industrial Archaeology Group.

Thursday December 9th. Sid Canning will present a talk entitled **"Recollections of the Birmingham Paint Industry"** at 7.30 p.m. in the Warwick School Junior Drama Hall.

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Thursday January 13th. Our **Annual Members' Evening** of slides and videos at 7.30 p.m. in the Warwick School Junior Drama Hall.

Thursday February 10th Anita Hollier will talk on the **"Early Development of British Petroleum Marketing in Great Britain"**. This will be based on the BP Archives, now housed in the Modern Records Centre of the University of Warwick.

Thursday March 10th. Annual General Meeting, followed by Roger Cragg on **"The Life and Works of Thomas Telford"** at 7.30 p.m. in the Warwick School Junior Drama Hall.

Thursday April 14th. Arthur Jordan on the **"Great Central Railway"** at 7.30 p.m. in the Warwick School Junior Drama Hall.

Any requests for further details of these meetings should be addressed to Martin Green 0926 313782.

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