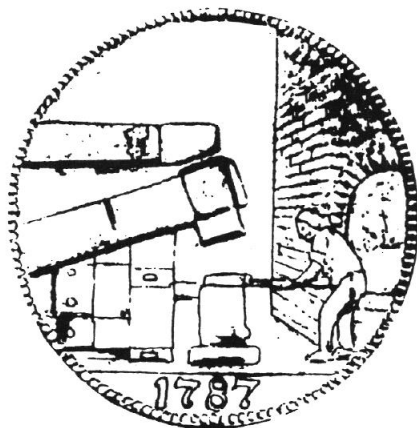


# THE JOURNAL OF THE WILKINSON SOCIETY



**No. 16 1988**

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(An appreciation of Chris Whall, the Treasurer of the Wilkinson Society from 1977 until his death in 1987, appears on the inside rear cover of this Journal.)

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Many back numbers of the Wilkinson Society Journal (viz. all except No's 1,2,3 and 10) are still available from the Hon. Treasurer at his home address below; price £1-00 each post free, payable to "The Wilkinson Society"

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HON. EDITOR:-

M.A. HAWES  
6 BELLE VUE  
THE ESPLANADE  
WEYMOUTH  
DORSET  
DT4 8DR

HON. TREASURER:-

C.J. POINTON  
"THE FARTHINGS"  
52 BAKERS GARDENS  
CODSALL  
NEAR WOLVERHAMPTON  
WV8 8HX

THE WILKINSON SOCIETY

The Society was formed in 1972, to preserve the material and documentary evidence of Broseley's industrial past. Since an important part in this industrial past was played by John Wilkinson, who lived for a time at "The Lawns", it was decided that the organisation should be known as The Wilkinson Society.

The aims of the Society are:

- (i) to act as the custodian of any relevant material and information and to make such material available to interested individuals and organisations;
- (ii) to promote any relevant preservation activity or to assist individuals or organisations in such activity where this is deemed appropriate;
- (iii) to provide a link with the community of Broseley for those who wish to undertake local historical research.

Any available material will be added to the collection of Broseley and Wilkinson relics, currently in store.

Administration of the Society is by an annually elected committee. Membership is open to anyone interested in the Society's aims and activities. These activities include illustrated lectures, social evenings, researching and exhibiting the collection, field trips and coach tours, all of which are publicised by newsletter. This annual Journal presents articles on the history of the Broseley area, John Wilkinson, and industrial archaeology in general.

FAREWELL TO OUR EDITOR

Owing to the pressure of work in his appointment as Headmaster at a school in Ellesmere, the long-standing Honorary Editor of our Journal, Neil Clarke, tells us that he no longer has enough spare time to perform the task to his satisfaction. He has therefore, reluctantly, resigned from the post.

Neil Clarke was the Honorary Editor of the Wilkinson Society Journal from Volume 1 (dated 1972) until Volume 15 (dated 1987). The reputation of the Society, and its authority as a learned body, both stem principally from the tremendously high quality that Neil consistently achieved in his editing. We may have had problems in the first two or three issues, with old-fashioned duplicating methods, but the quality of the material was never in doubt, and Neil's successors will find it hard to do as well.

As an emergency measure, the former Secretary of the Wilkinson Society, Maurice Hawes, has volunteered to take over as Editor until someone with better qualifications in History can be found to do the job. The different page size of this issue reflects the fact that it is a format which the new Editor normally uses in his other honorary editorial work on various computer publications.

Contributions and/or letters for the Journal are always welcome and should be sent to the Editor. Orders for back issues should be sent to the Treasurer. Both addresses are printed opposite.

NOTES AND NEWS (NOVEMBER 1986 - JANUARY 1989)

The previous issue of our Journal (No.15) was devoted exclusively to Richard Barker's important article on early iron barges. As a result, the "Notes and News" section below records somewhat more than two years of our activities; fortunately we are able to include a record of the 1988 A.G.M, in spite of the fact that it took place some three months later than usual!

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28th November 1986: 14th A.G.M.; No changes in the Committee; the formalities were followed by a discussion on the possibilities of setting up a Broseley Museum Trust.

11th December 1986: Joint Meeting with the F.I.B.G.M.

8th May 1987: "Broseley and the Domesday Book" (Neil Clarke)

27th May 1987: Annual Dinner at "The Lawns".

11th July 1987: Annual Outing to the Black Country Museum in Dudley, using members' own transport.

23rd October 1987: 15th A.G.M.; Chris Pointon elected Treasurer, no other Committee changes. The formalities were followed by a talk on "The New Blists Hill Ironworks" (Lance Smith).

13th November 1987; Joint meeting with the Broseley Society, to discuss the proposed Broseley Museum Trust (B.M.T.).

10th December 1987: Joint Meeting with the F.I.B.G.M.

In the early part of 1988, many active members of our Society and the Broseley Society were heavily involved in frequent meetings of the B.M.T. Steering Committee and/or working parties in the stable block at "The Lawns". As a result, the first 1988 meeting of our Society was not held until 11th July, and was a joint meeting with the Broseley Society; the principal aim was to show the newly restored rooms on the upper floor of the stable block, to members of both Societies, for the first time.

9th November 1988: Joint meeting with the Broseley Society, "Life in C.17th Broseley" (Dr. Barrie Trinder).

14th December 1988: Joint Meeting with the F.I.B.G.M.

27th January 1989: 16th (1988) A.G.M.; After 16 years' service, Maurice Hawes resigned as Secretary of the Society. Sue Perfect was elected as the new Secretary, and Kath Morris was elected to the Committee. A presentation to the retiring Secretary was followed by Aerial Photographs of Local Interest (Ron Miles).

In addition to the working parties noted above, your Committee met on 7th April and 25th September 1987; and again on 9th November 1988 (prior to the scheduled start of Dr. Trinder's talk).

RECENT DEVELOPMENTS AT BERSHAM

Just before this Journal went to the printers, our new Secretary Sue Perfect was in correspondence with Ann Williams, the Curator of the Bersham Heritage Centre, to discuss the possibilities of a visit there. As spin-off from this we received photocopies of several pages from various issues of the "Clwyd Archaeology News" dated "Spring 1988", "Summer 1988" and "Winter 1988". They reveal that there have been some very important developments at the Bersham Heritage Site in the last two years.

The page dated "Spring 1988" states that Clwyd County Council "recently" purchased Mill Farm, Bersham. From the article it is not possible to date the purchase exactly, but since it also states that "archaeological excavation started in 1987 and is continuing in 1988", it seems likely that the purchase was made in 1987, or perhaps a little earlier.

The 3 pages dated "Summer 1988" explain that the "second season" of excavations lasted three months and finished in June 1988, and revealed the remains of a reverbatory or air furnace, and the remains of a floor made of iron plates measuring 7ft by 1ft. These pages contain several photographs, and also the information that the excavation will continue in 1989.

The page dated "Winter 1988" tells of more surprise finds at Bersham during the summer of 1988.

Close reading of the small print reveals that the "Spring 1988" issue of "Clwyd Archaeology News" was the first in a new improved and enlarged format, issued by the Clwyd Archaeology Service and posted free to members on their register. The Wilkinson Society is now on this register and should therefore receive its own copies of the "Clwyd Archaeology News" in the future; but if you are interested as an individual, Ann Williams suggests that it would be a good idea to get yourself on the register personally. The address to write to is:-

Clwyd Archaeology Service  
Tourism and Leisure Division  
Shire Hall  
Mold  
Clwyd CH7 6NB

Four issues are produced each year. There are no back issues available, but Ann Williams has offered to supply photocopies of the Bersham pages to anyone interested, at the cost of 10p per sheet plus postage. In other words, send £1 and a large (A4) stamped addressed envelope to:-

The Curator  
Bersham Industrial Heritage Centre  
Bersham  
Wrexham  
Clwyd LL14 4HT

The telephone number of the Heritage Centre is 0978 261529.

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From M.J.Keef:-

Please send me a copy of the Wilkinson Society Journal on the "Trial".... incidentally I once owned an ex-Grand Junction Canal Co's icebreaker. This was built of 1/2" iron plates approximately 2ft by 3ft as far as I can remember. I always thought she must have been built early on; I cannot get any information on the size of iron plates and when they were first rolled and not forged. One would assume that the builders would have used larger plates if they could get them, or was the difficulty that compound rolls had not been invented and therefore the plates would have to be forged to get the right (sheer ?) and therefore they could only be of a size (which) could be handled hot by the Smiths ?

From Frank Lloyd:-

I have for some time been researching the main lines of my family history and on a recent visit to IronBridge was given your address (note spelling of IronBridge; I was born there and was taught to write it (thus) to avoid confusion with Trowbridge) ....my own direct line (LLOYD) were miners..this meant mine diggers as distinct from colliers who were diggers of coal... almost certainly came from North Wales via the Cornish tin mines.

My great-grandfather was Francis Lloyd who married Mary Cartwright at St. Michaels Madeley on 27/9/1819.....and (in various later entries in registers and censuses) he is accorded (an age corresponding to) a D.o.B of 1794, and his birthplace is always given as Madeley Wood..... the problem is, I can only trace one Francis Lloyd born in Madeley in 1794, and he died at the age of 12! Searching (the records) for the whole of Shropshire I find two possibilities - a Francis born in Broseley in 1791 (which is a bit adrift I think), and a Francis born in DUDLESTON near Ellesmere in 1794....in the records for that area there appears to have been a migration of Lloyds (and perhaps also of others) from Broseley to the Ellesmere/Dudleston area in the early/mid 18th century... and seeking a reason I can only think of John Wilkinson and Bersham ....Did he 'draft' miners from Broseley to sink his mines in the Ellesmere St Martins area? And by 1800 are they on their way back to Broseley....if my researches are correct, Edward and Mary Lloyd presented Francis with a nephew Samuel shortly after they returned to Broseley!

I'm surprised J.W.had an interest in mines. The Darbys certainly did not. They dealt with the "Miners" or..."Chartermasters". They bought the Materials from what today we would call Contractors - for coal etc. they paid as delivered but with iron ore they only paid for the weight of extracted iron! When J.W. took over at Bersham I have the feeling that he would ....draft the skilled know-how into the area from where he knew it existed and indeed where he had some influence over it - Broseley. It was just a hope that some papers existed which might confirm this...

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Can anyone enlighten Mr Keef ? When would such a boat have been built, and what might have been the reasons for using the size of plate that he mentions ? And can anyone help Mr Lloyd with the migrations of his family ? I will forward any replies - M.A.H.

From Richard Barker:-

Since I sent the text for "Iron Barges" I have found a few points to add, should you wish to print them...I have had responses from the Maritime Museums in Greenwich and Rio de Janiero, and a copy of the Swedish original of the Svedenstjerna extract, from Carl O. Cederlund of the Statens Sjöhistoriska Museum.

1). Wilkinson material in the Woolwich Proof-Registers, 1780-81

There is a paper in the "International Journal of Nautical Archaeology" Vol.17/1, pp.105-111, Feb.1988, which discusses the evidence to be gleaned from these registers, including references to Wilkinson and another local man, George Matthews of Calcutts. It discusses the evidence for casting marks and intermediaries used by Wilkinson, and compares the performance as regards weights and success at this proof of the various guns supplied to the Board of Ordnance at this period. The paper is entitled "The Woolwich proof registers 1780-81" by Ruth R. Brown of the Royal Armouries, and was presented at a conference there in 1986.

2). Gun from the "Mary Rose" (referred to in my article).

A recent chance conversation with Alexandra Hildred (of the Mary Rose Trust) revealed that this gun had just been re-radiographed more thoroughly. There are actually three longitudinal welds, not the one revealed by the original radiograph. This reduces the size of the "plates" to approximately the normal bloom.

3). Prophecies of "Old Mother Shipton (1488-1561)

From a rediscovered press cutting these are said to include:-

Iron in the water shall float  
as easy as a wooden boat

4). Journey through a part of England and Scotland during the years 1802 and 1803 - by Eric Th. Svedenstjerna: Stockholm 1804.

On the canal, close to the works, there were several barges, built out of sheets of iron, with a tonnage of 20 tons, and of the same shape as the normal wooden barges i.e. flat-bottomed, with a square stern and pointed bows. In general they lay higher and floated lighter than the wooden barges, they were well watertight and could withstand heavy blows, but each one costs 3 to 4 times as much as a wooden barge, and as the latter can, with some repair work, survive 20 years of use, it is still not decided whether this experiment will pay. Mr. J. Wilkinson is said to have even built a larger iron vessel on the River Severn, which was however less successful, I do not know why. At the time of my visit he was in London, and consequently I was unable to make his acquaintance myself, which meant that I lost the chance to get to know some of his experiments and inventions. He is an old man now, but still rich in ideas, with which he is, however, thought to have enriched Science more than himself.

(Translated for the Wilkinson Society by Mrs.Sue Lo, Manchester)

JOHN WILKINSON AND THE TWO WILLEY IRONWORKS

By Ralph Pee and Maurice Hawes

To set the story of Wilkinson and the two Willey Ironworks into perspective, we begin with a brief look at earlier developments in the coal and iron industries in the Broseley area; for without knowing something of these developments it is difficult to understand why Wilkinson built an ironworks at New Willey at all.

From early medieval times until the early part of the nineteenth century, the Broseley area was of great industrial importance because coal, iron ore, and limestone were all available in economic quantities near the surface, wood was plentiful, and the River Severn gave relatively easy access to the greater part of the kingdom. In 1600, the area around Broseley was one of the most important coal-producing areas of the country. We find several flanged-wheel wooden railways in use in the Broseley-Jackfield coalfield in 1605-8 to carry coal from the mines to the river(1). If, as is probable, this type of railway was in use in the area for some years before 1605, then Broseley may well claim to be the birthplace of the now world-wide flanged-wheel railway. At the time of the Civil War, in 1645, the fate of coal mined at Benthall was a matter of some strategic significance(2); and by 1758 it is recorded that some 100,000 tons of coal were being shipped each year from Broseley and Madeley to places down the river, and the number of vessels registered in Broseley (i.e. Jackfield, which was part of Broseley at that time) was greater than at any other port between Welshpool and Gloucester(3). This is a story of continuous expansion, not only in the coal-mining industry, but also in associated transport systems, including developments of national and perhaps even international importance.

The local iron industry developed concurrently. Small ironworks or "bloomeries" appeared early in the 16th century(4); and blast furnaces appeared at Shifnal in 1564, and Lilleshall in 1591(5). Some early ironworks were located in the valley still known as "The Smithies", about two miles south of Broseley, and a chain of ponds built to provide water power for the hammers of a bloomery or forge, or possibly the bellows of a blast furnace, may still be clearly seen on the right-hand side of the Broseley-Bridgnorth road where it crosses the valley. The first known reference to a blast furnace at the Old Willey site suggests that it already existed in 1618(6), and the first Coalbrookdale furnace as we see it today is date 1638. Whatever the origins of these furnaces may have been, they heralded an expansion which was soon to make the iron industry in East Shropshire of major importance. In 1754 there were three blast furnaces working in the area, one at Old Willey and two at Coalbrookdale; by 1759 there were twelve, including the furnace built in 1757 at the New Willey site(7). In 1788, Shropshire blast furnaces produced 37% of the total pig-iron made in the country, and one recent writer has observed that "in the 30 years between 1776 and 1806 the Shropshire iron trade reached the apex of its prosperity"(8).

The overall picture is of an area which, for the two hundred years between 1600 and 1800, cradled the expansion of a very prominent part of the British coal and iron industries. The story of the two Willey Ironworks spans this period almost exactly, and may be seen



not only as a piece of local history, but also as a story which links with national developments at many important points, and in its later stages highlights the contributions of John Wilkinson to the Industrial Revolution.

Before we attempt to describe the histories of the two Willey Ironworks, both of which ceased operation long ago and were on sites which now appear most unlikely in their rural tranquillity, we must emphasise that the two sites, though they bear similar names, are by no means adjacent. The Old Willey ironworks was located on Linley Brook, not far upstream from "The Smithies", where a dam may still be seen from the Willey-Smithies road; the site is about two miles S. of Broseley. The New Willey ironworks was on the Dean or Cod Brook, about half a mile S. of Broseley, near the toll-house on the Broseley-Barrow road. The two sites are thus about one-and-a-half miles apart.

#### OLD WILLEY IRONWORKS

We do not know a great deal about Old Willey ironworks in its very early days. But it is clear that when Sir John Weld bought the Willey Estate from Sir Francis Lacon in 1618, he was keen to carry on the already-existent coal-mining and iron-producing activities. It has been established that Weld spent around £500 on the furnace at Old Willey at about this time(9), a sum of money which, though large for the time, may be taken to indicate that he was merely rebuilding it, and not building it from scratch. For the next hundred years or so references are scanty, but it is known that Old Willey was working in 1610(10), 1657(11), and 1687-88(12). It may then have been leased to one Richard Baldwin(13); but in 1733, this lease was taken over by Ford and Goldney acting on their own account, whilst they were partners in the Coalbrookdale Company. At about this time they also took over the lease of a furnace at Bersham, near Wrexham. Ford and Goldney operated Old Willey until their lease ran out (probably in 1754); the furnace then seems to have fallen into disrepair, but was eventually taken over by the New Willey Company in 1757, and operated by them until 1774(14), when it finally closed. Thus the Old Willey Furnace, having seen many changes of ownership and fortune, operated on and off for at least 150 years; and from 1757 to 1774 it was operated in parallel with New Willey, by John Wilkinson. One of the difficulties which probably led to its closure was that the water supply was very inadequate in dry seasons.

#### NEW WILLEY IRONWORKS

The formal beginnings of the New Willey ironworks appear in 1757, with the setting-up of the New Willey Company; but we think it may be relevant to start the story by going back a few years earlier. In 1753, Isaac Wilkinson and his son John took over the Bersham furnace from Ford and Goldney of Coalbrookdale. One year earlier, in 1752, one John Wilkinson was buying coal from the Weld Estate at Willey(15). If these events refer to the same man, as seems likely in the light of what happened subsequently, then it may be concluded that our John Wilkinson came to Broseley in 1752 to buy coal. He may well have learned that Old Willey was about to become untenanted, spotted the potentialities of the area or heard about the imminent developments at Coalbrookdale, and hatched in his mind the idea of forming the New Willey Company. In any event, the New Willey Company was formed in 1757, with John Wilkinson as a

junior partner and technical manager. The Company was seen at this stage as a supplier of armaments and pig-iron; there were nine other people involved besides John Wilkinson, but he was the only one who had actually worked in the iron industry.

In 1757 Wilkinson was 29 years old, well educated, ambitious, and experienced in his trade. His first wife had died a year earlier, leaving him with "ample wealth". The location of the New Willey ironworks is hardly ideal, as the area is cramped and the way to the River Severn is over a steep river terrace. The brook is now very small and it seems likely that the water supply could not have been more than barely adequate in 1757. This may not have seemed very important to Wilkinson, as by that year steam power had been used elsewhere to pump water back from tail-races to storage ponds; it therefore seems probable that New Willey was designed from the outset to operate in this way. There certainly was a Boulton and Watt "Topsy Turvy" engine on the site from 1777 to 1796(16), and it is generally accepted that this design is indicative of a conversion from a Newcomen engine. It therefore seems reasonable to conclude that a Newcomen engine was originally installed in 1757, and was converted to a "Topsy Turvy" in 1777.

The water complex for the New Willey works seems to have consisted of four dams but these were not, as is usual, in a single chain. One very large dam, now breached, may still be seen some distance W.N.W. of the works site, near Lodge Farm. Two smaller dams may be seen, one on each side of the Broseley-Barrow road; they seem to have been on a tributary which is now dry. The location of the fourth dam, the one nearest the works, is not absolutely clear; but it seems highly probable that the embankment impounding the present pool, and carrying the old road to Dean Corner and Willey, is on the site of the fourth dam and may even be that dam.

On the site of the New Willey ironworks itself, two buildings have survived. One is part of a row of workmens' cottages; the other is on a larger scale and is reputed to have been stores and offices. Both were sold to private individuals by the Willey Estate in 1977, and have since been converted into dwelling-houses. Although the site has never been excavated on a scientific basis, there is considerable evidence from local contours and ground materials that a furnace (or possibly furnaces) existed against the bank which forms the southern boundary of the garden of the larger of these two houses. If this is so, the cramped nature of the site is emphasised by the proximity of the cottages to these works. Some 100 yards to the east of the surviving buildings, and now in the middle of an open field, there is a substantial brick culvert which leads the stream through an obviously artificial bend.

At the N.W corner of the site, just off the Barrow road and near the octagonal toll-house which stands at the edge of the present pool, are the remains of a small building which is traditionally known as the weigh-house. It is very reasonable to suppose that this was so, and that the New Willey works entrance was here, as the line of a very obvious old track, generally accepted as being that of the Willey railway to the river, starts from this spot.

Much of the ironstone and coal for the works seems to have come from Benthall, and the remains of a pack-horse track leading in the Benthall direction may be seen in a field opposite the weigh-house; however, a well-organised excavation on this route a

few years ago failed to find any evidence of rails. In contrast, the Tarbatch Dingle route referred to in the next paragraph did make use of rails, and was popular enough to justify eventual doubling along much of its length, as referred to below.

The railway built by the New Willey Company in 1757 ran from the works to join an existing railway which ran from Rowton down Tarbatch Dingle to the River Severn(17). Wayleave was obtained from George Forester. The output of the works must have been considerable, as one track was evidently not enough. In 1759 the Company was granted the right to lay new tracks and make a double railway, the width not to exceed 10 yards, at a cost of £12 a year. Part of the wharfage on the Severn, in the vicinity of Gitchfield, became known as Willey Wharf. The distance between the works and Willey Wharf is about 2.5 miles.

Since the Company was formed to produce (amongst other things) cannon, it seems virtually certain that there would have been a cannon-boring machine on the site before 1774, at which date Wilkinson patented his improvements. In view of the paucity of the water supply, this earlier cannon-boring machine may well have been horse-driven. The current owners of the larger building on the New Willey site found a cannon-ball in their garden during shallow excavations in the summer of 1980 (24).

Hearsay evidence of a hoard of lead shot found on the site some years ago suggests that there may have been a shot-tower, but for the present this must remain uncertain.

#### BROSELEY AND JOHN WILKINSON

In 1763 John Wilkinson married his second wife, another lady of means, Mary Lee of Wroxeter. He moved at this time into the "New House", now known as "The Lawns", in Church Street, Broseley, and it seems that some remodelling of the house took place at this time. A chimney-piece designed by J.F. Pritchard (the Shrewsbury architect who later became famous as the designer of the Iron Bridge) is still to be seen in the house, together with a copy of the original design drawing, which names John Wilkinson as the client, and is annotated with the names of the workmen employed to build the chimney-piece and the hours they took to complete their work. About this time Pritchard was commissioned to modernise many large houses in Shropshire, including Broseley Hall, which stands just across the road from "The Lawns".

At some time between 1763 and 1774 Wilkinson gained complete control of the New Willey Company, and it seems to have continued its normal business during this period, in spite of his absence for long periods supervising his works at Bradley and Bersham; in 1773 J.W. wrote to his manager in Broseley saying that after four years' experimenting he had not only succeeded in using raw coal for smelting, but he had also doubled the output of the furnace. He was writing from Bradley.

In 1774 Wilkinson patented a new method of casting and boring cannon, using a machine which caused the work to revolve whilst the tool was advanced along slideways. In his application for this patent J.W. addressed himself as "Ironmaster, of Broseley", and it is tempting to surmise that the machine, which produced the first accurate cylinder for the prototype Watt engine, was developed at

New Willey. Whether this be true or not, the larger machine which Wilkinson developed for boring the cylinders of the subsequent production models was at Bersham, and was never patented!

After the success of the prototype Watt engine, Wilkinson lost no time in ordering a Watt engine for New Willey, and obtained the second production model(18). It had a 38" cylinder and was used for blowing both furnaces direct. We have a complete diagram of the blowing mechanism used; it has two "regulating bellies" giving a continuous blast of 4lb/sq.in through a 3" tuyere. James Watt personally superintended the erection of this engine in 1776, staying at the "New House" in Broseley whilst doing so. Brigadier Marchant de la Houliere, who toured this country on behalf of the French government about this time, also stayed at the "New House" whilst visiting New Willey to investigate the reasons for the superiority of British cannon. In his report he remarked on the design of the regulators for the blast furnaces(19).

As already mentioned, the "Topsy Turvy" engine (1777) discussed by Watt is thought to have been a conversion of an earlier Newcomen engine(20). Since the furnaces at New Willey were now being blown direct by the 38" engine, the "Topsy Turvy" engine was employed to supply a water-wheel and thus drive a boring-mill(21).

The last steam engine at New Willey had a 30" cylinder and was used to drive a boring mill direct; it was apparently built without licence from Boulton and Watt, in 1787(22). Wilkinson built a number of engines without licences, and they are usually referred to as "pirate" engines.

Wilkinson's famous iron boat, the first in the world, was launched at Willey Wharf in 1787. One of the products of the works at this time was bar iron, which the iron boat and others like it carried via the Severn, and the Staffordshire and Worcestershire canal, to forges in the Birmingham area.

From 1778 onwards Wilkinson executed an order for 40 miles of iron pipes for the Paris waterworks, and also supplied steam engine parts to France. Many of these items were made at New Willey and shipped down the River Severn. As England was at war with France at this time, the pipes gave rise to charges of "gun-running". They were 12" and 14" in diameter, in sections weighing up to 8cwt each (23). The business was legitimate by the ethics of the time, but caused Wilkinson "a lot of worry for little profit".

It appears that John Wilkinson did not live in his Broseley home after 1780; but it was not until 1800 that he leased "The Lawns" to John Rose, the Coalport china manufacturer. New Willey works seems to have closed in 1804; since this was also the date at which Wilkinson opened his works at Hadley, it seems to indicate that he was one of the first to realise that the East Shropshire coalfield, south of the Severn Gorge, would soon lose its industry to the more accessible parts of Shropshire and the West Midlands.

John Wilkinson died at Bradley in 1808, and his industrial empire disintegrated in the years that followed, due to a succession of legal wrangles involving his legitimate and illegitimate heirs.

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Editor's Note

The above was originally published in May 1974 as a separate document entitled "Wilkinson Society Monograph No.1". The main body of the article was entirely the work of Ralph Pee; I added a simple introduction and a paragraph to cover early wooden railways in Broseley; and I checked Ralph's bibliography.

In 1974 it was hoped that "Monograph No.1" would be the first of a series of such publications, covering various aspects of the Society's interests. In the event, no further Monographs have ever been written. Furthermore, as our ideas about the New Willey site, in particular our ideas about the location of the furnace(s), have since undergone considerable revision, it has for some time been quite clear that a major revision of "Monograph No.1" was becoming essential; for this reason, we had allowed the original edition to go out of print, and avoided references to it wherever possible.

We have now decided that, instead of producing a second edition of the Monograph, for sale to any interested individuals, we should publish an updated version in the Journal for the benefit of all members, some of whom may not have had an opportunity to read the original, and possibly did not even know of its existence. We trust this step will meet with your approval.

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THE WILLEY IRONWORKS - A PLEA FOR ACTION by Douglas Braid

The sites of the Wilkinson ironworks at Broseley have no identity in the minds of passers-by, and precious little even in the minds of specific visitors. Many reasons exist for stating that these areas should be seen and recognised as an important part of our Industrial Heritage. It was here that John Wilkinson displayed the first signs of the considerable management and technical skills which he was to exercise for the next fifty years, and it was here that he took his first steps to advance the Industrial Revolution.

The main reason for this lack of interest is that the importance of these sites has not been made known to many people. There is also a shortage of reliable information, and detail to bring it home, except to very enthusiastic seekers. Site examinations and searches for the records of the layouts of the Willey furnace sites have not received adequate attention in the past. Reliable technical or logistic description of equipment does not appear in past records in sufficient detail to allow present-day researchers to make assessments. It can only be hoped that further records will appear if a current study of archives is permitted and made.

A general survey of the sites at New and Old Willey is needed to update previous searches, the last of which was made by Ray Pringle-Scott during the period 1979-83, and was recorded in the Journal of the Wilkinson Society, No.13, 1985, pp.4-11. I recently reviewed Ray's findings, with a view to checking anomalies in earlier writings about communications between the two furnace sites and Willey Wharf; they stand up well to critical analysis, but there is a need for documentary confirmation in the future. (I have copies of aerial photographs taken by Ray Pringle-Scott, and details of his field-walks over the tramway routes; but Ray holds the original negatives if further masters are required.)

The Willey Round House has been examined by the Ironbridge Gorge Museum Archaeology Unit (Series No.10)(1987), and any further investigations in the area are likely to be of considerable value. The dam impounding the pool and acting as a road to Dean Corner has both technical and historical importance. There is an outlet pipe through the dam that could have served water wheels, and the structure, from distant examination, appears to have an 18th century origin. It must be hoped that the owner will protect this part of the site from further damage until it has been recorded.

I plan to continue with my current work on related subjects i.e. a definitive history of Wilkinson's technological developments, and a detailed study of the letters and memos in the Boulton and Watt papers. But being well past normal retirement age, and based in London as I am, it would be difficult for me to spend sufficient time on site, even if permission to do so were easily forthcoming.

I therefore feel that professional support is needed, especially in view of the growing interest in John Wilkinson during the last decade, and the fact that the bicentenary of his death is only twenty years away. Professional skills, and funds to enable them to be deployed, will be needed to supplement voluntary effort. We must hope that sponsors can be found to enable the scale of the effort to be increased beyond its present level so as to do justice to John Wilkinson's advances in technology, which made such an impact on the Industrial Revolution in his lifetime.

AN APPRECIATION OF THE LATE CHRIS WHALL

By Maurice Hawes

Christopher Whall became Treasurer of the Wilkinson Society at the A.G.M. in November 1977, and was still our Treasurer when he died in tragic circumstances in April 1987.

As well as looking after finances, Chris helped in virtually all of our activities; he printed address labels for notices and journals; he helped to move the Museum to Broseley Hall, and helped to redesign and rebuild the exhibits, to suit the cellars there. On many other occasions, when we needed just one more pair of hands, Chris would make himself available.

The Society benefitted in many other ways from Christopher's enthusiasm for our aims, and he is already being missed, and will continue to be missed, particularly by those who worked closely with him for many years on our Committee.