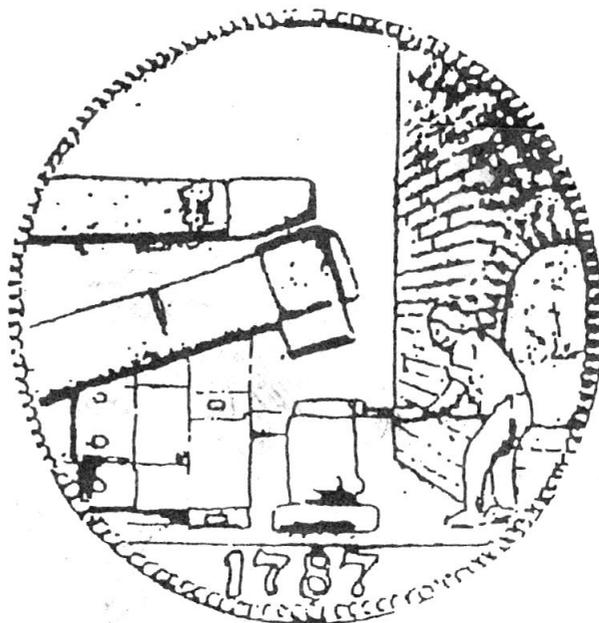


**THE  
JOURNAL  
OF THE  
WILKINSON  
SOCIETY**



**No. 13 1985**

**Price 45 p**

THE JOURNAL OF THE WILKINSON SOCIETY

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Editor : N. J. Clarke  
(March 1986)

## THE WILKINSON SOCIETY

The Society was formed in 1972 to meet the demand for an organisation 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 custodian of any relevant material and information and to make such material and information available to interested individuals and organisations;
- (ii) to promote any relevant preservation activity and to assist individuals or organisations in such activity where deemed appropriate;
- (iii) to provide a link with the community of Broseley for individuals or organisations undertaking local historical research.

Any available material will be added to the existing collection of Broseley and Wilkinson relics, part of which is on display at Broseley Hall.

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. Members are kept informed by Newsletters, and this annual Journal presents articles on the history of the Broseley area, John Wilkinson, and industrial archaeology in general.

## NOTES AND NEWS

### The Year's Activities (1983-84)

The Eleventh Annual General Meeting was held at Broseley Church Hall on Friday, 14th October 1983. The meeting began with a minute's silence in memory of the late Ralph Pee, who was a founder member and had been the Society's Curator from the date of foundation until his death.

The Secretary reported that several copies of books and pamphlets had been received from Mr. Leighton Wilkie, as a result of his visit on 17th September, 1983.

Mrs. Audrey Morton indicated that she wished to resign as Chairman, and Mrs. Veronica West agreed to stand in her place and was elected unanimously. The remainder of the Committee were re-elected nem con., and Mr. Eric Cox was elected as an additional new member. After the formal business had been completed, Mr. Brian Waterson gave a most interesting talk, illustrated with colour slides, on "The saving of the last Severn Trow".

The Secretary visited Storchley Upper School on Thursday, 20th October 1983, to talk to the School History Club on "Broseley and John Wilkinson". He also presented the Club with copies of Mr. Leighton Wilkie's book and poster.

On 11th November 1983 Mr. Ray Pringle-Scott gave an account of his researches into possible sites for the building of John Wilkinson's first iron boat. His provocative conclusion, that Apley Forge was a more likely site than the bottom of Tarbatch Dingle, appeared quite credible in the light of his extensive underwater explorations and his other arguments, and the audience were certainly convinced that his title, "The Trial Enigma", was justified.

On 14th December 1983 we joined the Friends of the Ironbridge Gorge Museum for our annual joint meeting with them. The usual high class video entertainment was complemented by the mince pies and coffee provided by the Friends' Ladies Group.

On 8th February 1984 the Secretary and the Editor were invited by the Solicitors representing the Executors of the Will of the late Ralph Pee, to attend at "The Lawns" to collect Ralph's bequest of Porcelain and China (to the Society) and his Wilkinson papers (to Neil Clarke for editing and possible publication).

22nd February 1984 saw another very successful joint meeting with the Broseley Society, with our local member Ron Miles showing slides of Broseley and Ironbridge from his enormous collection, with comments in his own inimitable style. The refreshments were organised by the Broseley Society, and a most enjoyable evening was had by all.

On 30th March 1984 Dr. Barrie Trinder visited us once again, this time to talk about "Road Transport", with particular reference to the Telford section of the A5 trunk road. His illustrated mile-by-mile description of the route was an education in itself, and much appreciated by a good audience.

The proposed summer outing to Bath, with the Friends of the Ironbridge Gorge Museum, had to be cancelled due to lack of support from both groups.

In addition to the above general meeting, a Committee meeting was held on 6th April 1984, to discuss the programme for the forthcoming year. The Committee also took this opportunity to examine the items of porcelain and pottery left to the Society according to the Will of the late Ralph Pee. It was agreed that the Secretary and Mrs. Sue Perfect should co-operate to obtain at least two independent valuations of the items, and that the Secretary should obtain a copy of the Will from the Solicitors to ascertain whether any conditions were attached to the bequest.

#### Programme of Events (1984-86)

##### 1984

- 12th October - 12th A.G.M., followed by viewing of china collection bequeathed to the Society by the late Ralph Pee.
- 23rd November - 'Portraits of John Wilkinson' - illustrated talk by David de Haan.
- 12th December - Joint meeting with the Friends of the Ironbridge Gorge Museum.

##### 1985

- 15th February - Social Evening - 'Found under the floorboards'.
- 22nd March - 'Oral History in the Ironbridge Gorge' - illustrated talk by Ken Jones.

- 18th May - Summer outing to Bersham Industrial Heritage Centre.
- 13th October - 13th A.G.M., followed by Roger Edmundson on current market values of typical pieces of Caughley china.
- 8th November - 'John Wilkinson and new methods of transport' - illustrated talk by Neil Clarke.
- 6th December - Joint meeting with the Friends of the Ironbridge Gorge Museum.

1986

- 21st March - Social evening and dinner at The Cumberland Hotel, Broseley.
- 4th April - Joint meeting with the Broseley Society.
- Summer - Visits to the Black Country Museum (date to be decided).

The Journal

Contributions (articles, short notices, letters, etc.) for the 1986 issue, should be sent to the editor, N.J. Clarke, Cranleigh, Little Wenlock, Telford. Back numbers can be obtained from the Assistant Secretary, Mrs. Freda Spickernell, 11, High Street, Broseley.

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CORRESPONDENCE

John Wilkinson, Banker

Apart from his many other activities in the world of iron, John Wilkinson promoted other commercial activities, including that of founding - or helping to found - banks.

I have been unable to discover the whereabouts of these banks of which he must have been a partner, with the exception of one, commonly known as Messrs. Dorsett & Co. of No. 68, New Bond Street. Originally George Dorsett, a partner in Messrs. Pybus & Co., had broken away from the partnership and formed a banking house as Dorsett & Johnson in the City in 1783. In 1784, Sir Herbert Mackworth, Bart., the South Wales Industrial Baron had joined Dorsett & Johnson, as did John Wilkinson. That same year they were acquiring the necessary furniture and premises in New Bond Street, and they opened for business proper in the New Year of 1785.

Can anyone supply information on this aspect of Wilkinson's business life?

Peter Robb  
Keyworth, Notts. (April 1985)

*(There is a reference to 'the bank of Eyton, Reynolds and Wilkinson' extant in 1805 in Trinder's 'Industrial Revolution in Shropshire', p.234 - Ed.)*

## THE 'TRIAL' ENIGMA

*The following article is adapted from the author's lecture to the Society in October 1983, which was the result of a personal five year investigation into what is arguably one of John Wilkinson's 'grey' areas. This involved not only documentary research and fieldwork but also underwater archaeology and aerial photography.*

1987 sees the bicentenary of a most remarkable local event, an event which sent a ripple of amazement throughout the whole technological world. Although reasonably well documented for the time, the occasion is still shrouded in mystery and legend. It was the launching of the world's first iron boat, the "Trial", at Willey Wharf.

On 9th July 1787, the great Broseley Ironmaster, John Wilkinson, gave the signal and a pair of his own thirty-two pounder cannons boomed out across the Severn to signal the descent of the 70 foot "Trial" down the launching waypiece into the river. The large crowd which had turned up no doubt to watch the vessel sink like a stone (or rather a block of iron), must have cheered with amazement as the vessel lay bobbing gently on the surface, and for the first time in history iron was seen to float. Wilkinson was delighted, his far-sighted innovative imagination and technological pioneering instinct had proved right once again. "She swims exceedingly light", he wrote; and a whole new era of maritime history had begun.

However, that was not the end of the story. I found that the aftermath, even less well documented, was equally fascinating. Within three months Wilkinson had launched two more iron boats, one similar to the "Trial", the other a much larger 40 ton barge. The only record of this is a letter from Wilkinson, dated October 1787, and written from his Bradley Ironworks, stating "Two more iron vessels have lately been launched into my service at Willey Wharf - one is a barge of 40 tons which I expect is now at Stourport with a loading of bar iron. She exceeds even my own expectations".

The "Trial" had typical narrow boat proportions, 70 feet long with a beam of 6 feet 8½ inches, and was designed to be used on both river and canal alike. The unnamed 40 ton barge, however, was designed exclusively for the Severn. Whether she was successful or not, and what happened to her, I could not discover, but since the big Severn trows continued to be constructed mainly of wood until their eventual demise early this century, I can only assume that the Iron Trow was not a success.

I was fascinated by the whole episode, and, as it had all happened practically on my own doorstep, I determined to discover as much as I could about it. In 1979 the late founder of the Wilkinson Society, Ralph Pee, whetted my appetite for some empiric research by confiding that he was not entirely satisfied with the accepted location of the presumably substantial "Willey Wharf". Locally the site is said to be near Swinney ("around Gitchfield"), adjacent to the confluence with a small stream running down Tarbatch Dingle. But Ralph had reservations - there were anomalies, he said. So I read everything I could find on the subject in both public and private collections. The ingredients were there for a first-class project, but the facts were, to say the least, woolly.

In 1757 the old seventeenth century ironworks or 'bloomary' at the Smithies near Nordley was rebuilt by the New Willey Company of which John Wilkinson was Ironmaster and executive director. In the same year the Company obtained a wayleave from George Forester to "lay rayles and make a waggon way". The following year the Company started building a completely new ironworks at a site some two miles north

of the Smithies near Broseley. This became known as the New Willey Works and was finally completed in 1759. In that same year Wilkinson obtained a further wayleave to build a new railway, a double one this time, "not exceeding ten yards in breadth". Unfortunately the references do not intimate where these "rayles" went to (or came from), so the dates are important. The 1757 rails would presumably have been connected with the old site, at this time being rebuilt, whilst the 1759 wayleave would certainly have been to improve facilities at the New Willey Works then nearing completion. It is also interesting to speculate about the "rayles" themselves. It was to be another decade before Richard Reynolds of Coalbrookdale would be credited with producing the world's first cast iron rails; but it seems inconceivable that "Iron Mad" Wilkinson would have used wood for anything! Could this have been another first, lost to history, for the great ironmaster? However, we know quite a lot about the "double railway" constructed by Wilkinson in 1759. It followed a course almost due west from the New Willey site crossing land at Riddings Farm and then joining an existing track at Rowton Mine which followed the small stream down Tarbatch Dingle to the river. It is widely accepted that this is the route which Wilkinson used to transport the intact "Trial" for its historic launching in 1787.

It seemed logical to commence my research by attempting to retrace the route of this old track. The Ordnance Survey "Pathfinder" series map of the area does not offer much in the way of clues, and I was rather disappointed to find that at ground level the obvious route from the site of the New Willey Works disappears completely within a few hundred yards of the site itself. I was not disillusioned, however, as I had read that in 1803, after the wayleave period was over, the company was ordered "to remove all rails and sleepers on Riddings Farm and level the land". The original Rowton Mine track, which Wilkinson had adapted for his own use in 1759, evidently survived much longer, and it can easily be followed down Tarbatch Dingle from the old pit spoil mound at the top of the valley.

In 1979, when I first examined this track, I even discovered some old cast iron rail sections, but these have since disappeared. The track winds steeply down the dingle, at one point crossing the brook on a small stone bridge, and it became increasingly obvious, as I descended, that transporting an intact seventy foot vessel, weighing an approximate 8 tons, down this valley would have been a colossal achievement in the 18th century. The track width, still measurable in places, was a standard pit gauge of some 20 inches - not entirely suitable for transporting a single large load, and at various places the incline becomes very steep indeed. Finally, about half way down the mile long valley, comes the real crunch. The track takes a very sharp (almost hairpin) bend, which, when measured out, showed that an intact 70 foot vessel would have had at least two-thirds of its length overhanging a sheer 30 foot drop on the apex! A problem that even the redoubtable Mr. Wilkinson would have had some difficulty solving.

I began to have doubts, and these became stronger when I reached the river itself and stood on the supposed site of the wharf, near the two old "Furnace" cottages. The bank was steep and crumbling, and, when I first visited it in winter, the top was some 15 feet above the water. There were no signs of any formal wharf structure, and the river, at this point only some 30 feet wide, was rushing past at an alarming (and audible) 7 to 8 knots. Perhaps the force of the river had eroded the wharf away completely in the past hundred or so odd years, but surely there would be some remains. Perhaps they were at the bottom of the river. I determined to dive at the spot as soon as river conditions permitted.

I made my first dive in May 1980. It was exciting, but fruitless. The river-bed was swept clean by the remorseless current which even at mean low water bore me along at 2 to 3 knots. I searched nearly a quarter of a mile of river-bed for any

signs of dressed stone or coherent brickwork which might have indicated the remains of a wharf, but the only man-made objects in abundance were tile fragments and china sherds. Underwater the conditions were relatively good with visibility in excess of five feet. I saw abundant fish life, including some very large barbel, and the water was filled with the musical sound of china sherds tinkling across the bottom. But of any previous industrial activity, nothing remained. I was also rather disappointed to find that the river was so shallow - only four to five feet deep in the middle. Either the river-bed and banks had changed out of all recognition since Wilkinson's time, or I was in the wrong place ..... I decided to sit on my hands for a while.

As luck would have it I had chance to overfly Broseley in June 1980 and did a couple of extra photographic circuits over the New Willey Site. The resulting shots were quite informative and showed much detail not visible at ground level. Three distinct tracks could be seen leaving the site: one running easterly towards the Severn (the one that I had followed); another curving off through the woods towards the "Fiery Fields" west of Broseley and clearly visible as a tree pattern change (Benthall Rails?); a third headed off in a south-westerly direction into the Willey Estate. This last one intrigued me, but a few minutes examination of the Ordnance Survey maps again soon solved the mystery. The track led past Dean Corner Farm then curved back south-easterly to Willey Village and then went on to the Smithies, the site of Wilkinson's first works. I learned later that this was accepted as the old coach road to Barrow, but I wondered if it originally had a Wilkinson connection. The Old Willey Furnace Site was not finally closed down until 1774; so, with the New Willey Site fully operational in 1759, Wilkinson evidently ran both sites in conjunction with each other for a full fifteen years. Under the circumstances it is quite probable that there would have been a direct link between the two sites to move raw materials, finished good or even personnel.

My interest was rekindled and I determined to take a closer look at this site-linking track. With the kind permission of Lord Forester, I went over every inch of the route in May 1981. A substantial amount of civil engineering work had gone into levelling this track, and it can be seen at close hand crossing the road at the lower of the three Willey pools, once holding ponds for the furnace site, and now well stocked with trout and used exclusively by the Shropshire Flyfishing Association. From this point the track can easily be seen from the vehicular road on the opposite side of the Linley brook. It is cut neatly into the hillside and closely follows the 300 feet contour line directly to the Smithies and then right on to the Bridgnorth-Broseley road. This track puzzled me. Why go to all the trouble of carefully levelling a track to run roughly parallel with an existing road? Unless the road came after the track. But why then bother to make a winding, hilly road at all? The answer had to be that the track was used for transporting large or heavy loads, probably horse-drawn and almost certainly on rails!

I wondered if the track did terminate at the main road or whether it pre-dated it. I explored further and, sure enough, the track reappeared on the other side of the road which had evidently been substantially built up to bridge the stream at the bottom of Nordley Hill. It is easily followed along the north bank of the stream past the magnificent half-timbered Jacobean Hem Farm. This is a beautiful walk. Wildlife abounds, and the remains of several ruined mills and forges bear forlorn witness to the amount of activity this once important stream must have promoted. I felt that there had been some fairly recent land movement along the north bank, as many fallen trees and deep gullies were in evidence; and at times there was very little sign of the once neatly levelled track I was attempting to follow. But once past the area of shippage, the track reappeared in a most dramatic way.

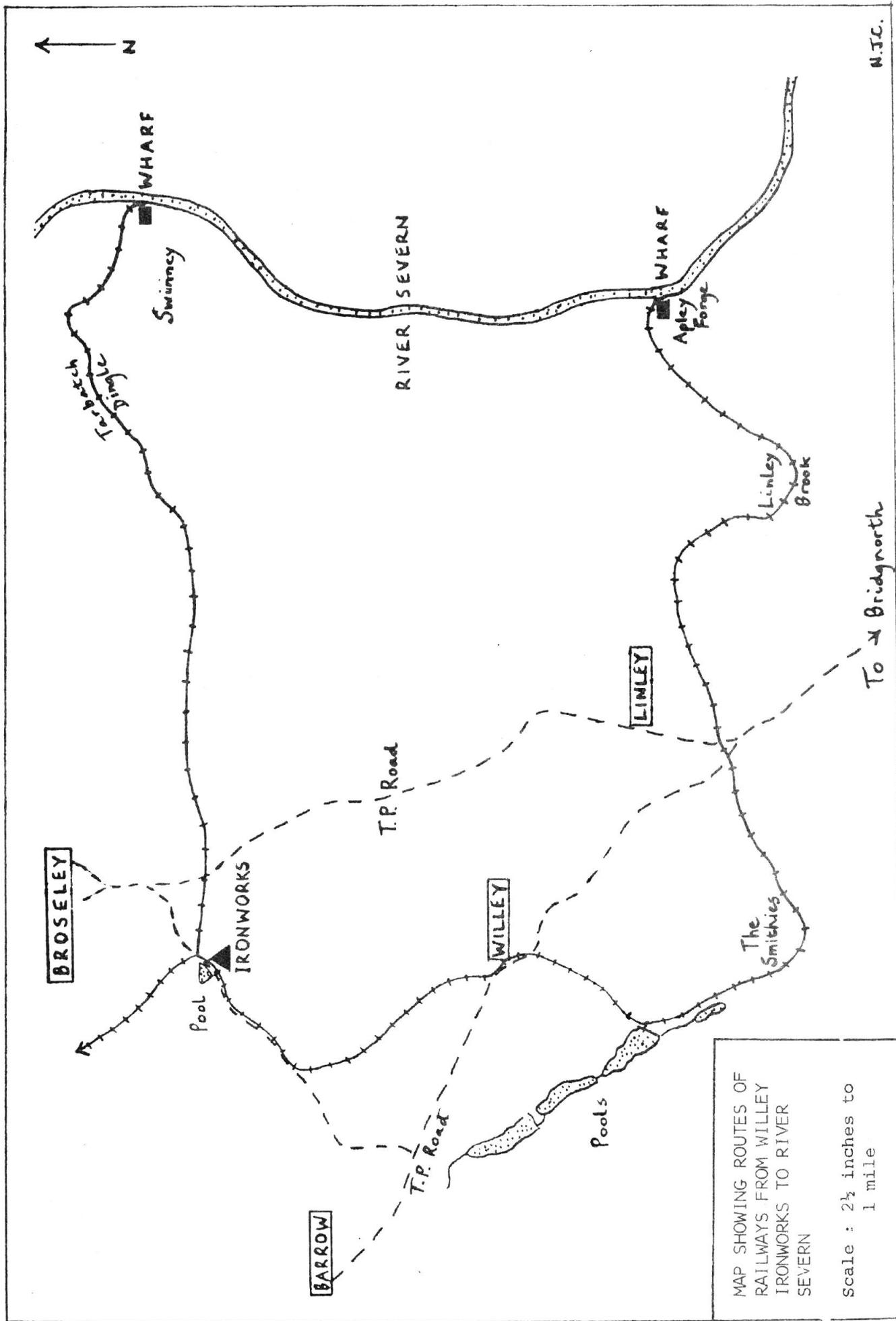
I initially followed the route in early Spring when there was little secondary growth to obscure detail, but the ground at that time was extremely muddy. As I slowly squelched along an avenue of large oaks, I suddenly realised that the parallel furrows I was following were not impressed tractor tyre marks, as I had unconsciously surmised, but actually raised ridges. Countless cows had passed this way, churning the soft mud into a viscous emulsion which had gradually contracted and shrunk, revealing two pairs of distinct hard ridges. With mounting excitement I carefully excavated one, and under the top soil the ridge comprised a robust concreted aggregate of gravel and small stones, nothing like the surrounding indigenous mud. Surely these must have been the foundations of another railway system, lost to history and now revealed through a quirk of nature? The original position of the tracks was quite obvious, the subsoil having been compacted by continuous heavy loads. I photographed the phenomenon from every angle, in black and white and colour. The tracks were widely spaced - a broad three foot gauge, compared with the 20 inch Tarbatch Dingle tracks, and set in an avenue nearly 30 feet wide. I wondered how many local historians or industrial archaeologists knew about them. Not many, it seems, and the tracks have now vanished, but are still detectable by divining rod.

I followed the now very obvious track with mounting excitement. As I neared the river, the route curved away from the stream but was still quite level. It appeared to terminate at the built-up section of the more recent railway track near the old Linley Station, now beautifully restored as a private house. It occurred to me that 'my' track may have been nothing more exciting than an old GWR branch line. But no, I was relieved to find that it became re-established on the other side of the modern railway and skirted what was evidently a large dried up pond, before terminating at (or joining) the old river towpath on a level stretch of river bank showing much evidence of dressed stone reinforcement. In the trees adjacent to the bank I discovered a large and complex range of substantial foundations, partly old and partly modern. The older sandstone foundations were pinioned together with big cast iron staples set in lead. As these foundations spanned the stream I guessed that they were the remains of Apley Forge.

Apley? A bell rang in my memory. I had been puzzled by an obscure reference to Apley in an old account I had read, about the launching of the 'Trial'. The author had stated "... and the Apley Rookery, disturbed by incursive visitors, furnished a hovering cloud of sable spectators". And, sure enough, the Ordnance Survey map still shows the rookery adjacent to where I now stood!

At that time I did not know much about Apley, so it was with some interest that I followed the old towpath under the elegant miniature suspension bridge which had been built to replace the ferry. The river was wide and calm indicating perhaps considerable depth, and it was with amazement that on rounding a bend I found myself opposite a large perfectly preserved wharf, still complete with cast iron mooring rings. The sandstone structure was 30 yards long and pinioned together with iron staples identical to those used in the old forge further up stream. In the water beside the wharf I noticed some curious eddy patterns, indicating something large underwater. Another diving possibility for the future?

A little further downstream I came across the remains of a 'bylet', and alongside, the remains of a large building. I have a unsubstantiated theory that the numerous bylets along the Severn were the original 'lay-bys' (or rather 'let-bys') of the navigation when river traffic was at its zenith. Near every one I have examined is a large building, probably once a pub (or bawdy house) in which the barge-masters would have caroused the nights away whilst their vessels lay moored in the barge gutters outside. Perhaps the bow hauliers and poorer members of the crew camped out on the island itself. But I have yet to find any reference explaining why the barge gutters were kept open and in such good repair after the official dismantling of the commercial fish wiers and traps (which the barge gutters were dug to by-pass) back in the 16th century.



N.T.C.

MAP SHOWING ROUTES OF RAILWAYS FROM WILLEY IRONWORKS TO RIVER SEVERN

Scale : 2½ inches to 1 mile

I found out later that the bylet at Apley is known locally as "Cox's Island" and the ruined building has the name "Wrens Nest" associated with it. I examined the building with interest. It had obviously been constructed at different periods, and a square sandstone section at one end presumably pre-dated the larger brick and mortar structures now half buried. A close inspection of the stone building proved it to be rather curious. 25 feet square with walls nearly 3 feet thick, it had no apparent original windows, only two narrow vertical slits protected by cast iron grilles. I wondered what it could have been used for? It reminded me of an armoury. I suddenly remembered reading that Wilkinson had constructed a "warehouse" somewhere on the Severn, presumably to store mortar shells and other small or hazardous items awaiting shipment. As far as I know, no one has ever actually discovered where this was built - could this be another piece of the jigsaw?

In October 1983 the river was unusually placid and I obtained permission from Apley Estate to dive from their wharf. As I was kitting up, this time with two colleagues from the Broseley Special Projects Group, we were approached with some curiosity by a sprightly local octogenarian - who had never seen a diver before, but politely asked if we could keep an eye open for her mother's bike, lost in the river back in the Thirties! We promised that we would do our best, and slipped once more into the gloomy depths. The area around the old forge proved most interesting, with much evidence of previous substantial foundations along some 150 feet of river bank. The brickwork seemed to terminate at the confluence with the Linley brook which also had a brick built culvert. The depth upstream of the bridge at low water was a respectable 12 feet, but downstream, in the area adjacent to the intact wharfage the river was much deeper. Here huge blocks of stone lay scattered randomly across the bottom some 20 feet down and made sinister caves and tunnels in the black depths. I flinched as a very large fish broke cover from one of the caves and I realised that the area was a perfect natural (or contrived) salmon refuge. The massive stones may have been the cargo from a trow, although there was no indication of a sunken vessel carrying the boulders. I knew that parts of Apley Hall were rebuilt around 1810 using stone from Grinshill Quarry and manpower from the Napoleonic prisoners of war. The large stones were not indigenous river bed and were obviously the reason for the eddy patterns I had noticed on the surface.

We found much evidence of the previous maritime history of this once active stretch of river, including what may prove to be a portable cast iron forge or cooking stove from a trow. Just as we were about to terminate the dive in the shallows of Cox's Island, there amongst an underwater midden of debris and weed we discovered a very old rusty ladies bicycle with white-wall tyres!

Millie was delighted and proceeded to revive our spirits with several glasses of her devastating home-made wine.

My theories began to crystalize during our post-dive discussion. Obviously Apley must have been an area of much activity during the heyday of river transport - the 1810 pencil sketch proves that. I had also discovered an interesting fact from a copy of the accounts of Trow owner Eustace Beard of Broseley, in the private collection of Ivor Southorn. On 8th September 1756, Beard transported 14000 fire bricks "for the new furnace at Willey". From the date, this has to have been the first furnace site, so the track from Apley to the Smithies must have been in existence in some form then. It is only logical to assume under the circumstances that Wilkinson had some connection with the area, and this may be the ultimate clue to Wilkinson's first wayleave obtained the following year.

It has also been theorised that perhaps Wilkinson did not actually transport the "Trial" as an intact vessel, but merely cast the plates at the furnace site and assembled them at the river. This suggestion has met with howls of protest from the purists, but must have been the case I think with the 40 ton barge launched two months after the "Trial". With the limited resources available in the 18th century, moving an intact vessel this size would have been practically impossible.



*Linley Forge C. 1810*

PENCIL SKETCH OF LINLEY (APLEY) FORGE, DATED c. 1810,  
REPUTEDLY DRAWN BY A NAPOLEONIC PRISONER OF WAR.

Even the Ironbridge Gorge Museum had difficulties transporting a similar one in 1983! But in either case an adjacent forge would have proved an asset.

There is also the obscure reference to Apley Rookery written by John Randall in 1870. This seems an odd thing to invent for literary purposes, particularly from a respected local historian. It is quite conceivable that Randall spoke to actual eye-witnesses of the launching, so some credence must be given to the reference. However, the rookery is some two miles downstream of the accepted site of the launching - rather too far for even cannon-fire to disturb the resident avian population, and too far away for onlookers to have noticed even if it had!

*It is not surprising that John Wilkinson named his river terminus after his ironworks; but was "Willey Wharf" in fact at the end of the Linley Brook rather than the Tarbatch Dingle railway, and so was the "Trial" launched at Apley rather than at Swinney?*

RAY PRINGLE-SCOTT

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#### WILKINSON MONUMENT RESTORED

*The following item, which appeared in a recent issue of the Bulletin of the Association of Industrial Archaeology, was supplied by its author, John Powell, Librarian of the IGMT. Unfortunately we cannot reproduce the pictures that accompanied the original.*

It is always a pleasure to be able to report a success story, and Bulletin readers will be glad to hear that the John Wilkinson Monument, at Lindale in Cumbria, has now been restored, and a small ceremony was held to commemorate this achievement alongside the monument on Saturday, 11th May. Miss K.G. Hill, Clerk to the Allithwaite Upper Parish Council, and one of the organisers of the restoration appeal, has been kind enough to suggest that some of the success of the appeal was due to a mention in the pages of the AIA Bulletin two years ago. In any event, enough money was raised for the work to be done, and a small amount is in hand for future maintenance.

After the setting up of a Restoration Committee, and the repair of the inscription plaque, both of which happened in 1982-3, the main work was undertaken in 1984. On 27th April, the three sections of the monument were carefully dismantled and transported to Buxton, where the work was to be carried out by Dorothea Restoration Engineers Ltd. Following examination of the base which was now revealed, it became apparent that this would have to be replaced. Following tenders, the contract was awarded to Thos. Armstrong of Cockermouth. On 16th October, the monument arrived back in Lindale, the three sections were duly re-erected, and re-painting was carried out over the next few weeks. Some remedial work on the base was completed in January-February 1985, and the site was generally tidied up in March-April ready for the ceremony which has just taken place.

Further information on the history of the monument and the bizarre events surrounding its erection and later removal can be found in John Randall's book on Wilkinson dating from 1876, or John Dickinson's "John Wilkinson : Ironmaster" of 1914. In more recent times, an article on the obelisk has appeared in the Foundry Trade Journal for 8th October, 1981.

(cont. page 14)

## THE VISIT TO THE BERSHAM INDUSTRIAL HERITAGE CENTRE

Saturday, 18th May 1985, should be remembered for two events. The first was the F.A. Cup Final; the second was the visit by members of the Wilkinson Society to the Bersham Industrial Heritage Centre. While many thousands of people were assembling at Wembley, a somewhat smaller gathering was to be seen in the vicinity of Broseley library - 13 people in all.

Precisely at the appointed hour, Maurice Hawes shepherded his flock into the sumptuous transport facility provided by Messrs. Elcock and Son. While Maurice had ordered a 29 seat coach as a suitable vehicle for the anticipated number, Elcocks quite rightly assumed that the Society members were worthy of much more luxurious accommodation and so provided us with one of their fine 42 seater machines. Not only did we get this, we were also favoured by having an excellent driver who was both courteous and pleasant.

The Bersham Industrial Heritage Centre is situated in the historically important village of Bersham, a few miles west of Wrexham. The museum is located on the site of the original John Wilkinson iron works and is contained within a purpose-built building. Adequate parking facilities are available on the site as we saw when the coach finally ended its journey. Outside the museum, between it and the car park, stands a full size reconstructed horse gin of the type used to raise and lower cages up and down the mine shafts in the area. We disembarked and made our way towards the museum building. Maurice, who had preceded us, now emerged from the museum entrance, accompanied by a charming young lady - Miss Williams, curator at the Industrial Heritage Centre - who was to be our guide for the time we were there.

The weather to this point had been kind to us, but now threatening clouds were gathering. The itinerary, which was originally planned to take in the museum first with a walkabout after we had been fed and watered, was sensibly reversed in order, so that the visit to the open sites could take place before any rain came. We re-entered the coach and were transported to Minera, the start of the industrial trail.

Here we explored the lead-mine workings as they could be seen, clambering over spoil from the mines and examining lumps of rock for good examples of lead bearing ore. These workings had eaten into the sides of the hills which in some parts rose almost vertically to their peaks. The result of this working was that large quantities of water descended into the mines with consequent grave danger to the miners. In an effort to reduce this water, pumping engines were installed, the outflow from which was fed into the river Clywedog. Although this was reasonably (but not fully) effective, it did produce problems due to the whole mining landscape being divided into fairly small, privately owned areas. Competition was intense and there was much rivalry between owners, so that if one mine struck a rich vein of lead ore, usually on a lower level, the remaining owners would reduce the effectiveness of their pumping engines thereby flooding that level and so preventing the vein from being worked. It was normal for men to work only a few feet above water of considerable depth, but in spite of this, casualties were less than one would have expected. The incentive to work under these conditions was money, for the miners were paid according to the amount of lead ore produced. "No ore, no pay" was the order of the day. Three shifts were worked through the 24 hour day. Illumination below ground was provided by tallow candles attached to the miners helmets. These and other implements of labour had to be purchased by the miners.

We were shown the remains of the railway system used for transporting the ore and also the sites of capped and uncapped mine shafts. The latter we were encouraged to avoid! Moving along the path of the railway we passed a stone building which, we were informed, was divided into two parts. One was the smithy while the other was a drying room where miners could change their wet mining clothes for their own dry ones. It is understood that only on this parcel of land, under the ownership of one Owen Jones and therefore only for those miners working for him, was this clothes changing facility available. Although, as I have stated, accidents were few, some did occur. The worst recorded one happened on 6th February 1901, when the main cage securing eye bolt broke and the unsupported cage, which was about 180 yards into its descent, plummeted a further 400 yards to the bottom of the shaft. The four men in the cage were killed. Their bodies were laid out in the clothes drying room next to the smithy which at these times was pressed into service as a mortuary. A boundary stone which marked the limit of the land owned by Owen Jones can be seen near the smithy, with the name still legible. As Miss Williams pointed out, while it is relatively easy to determine the limits of one's property above ground, it is not clearly understood how the miners knew the limit of the property underground.

From this point, a decent was made to the only remaining engine house and chimney. As Miss Williams stated, considerable restoration work is required, more so as a result of a fairly recent earthquake which fractured the chimney and dislodged blocks from its top. Looking upwards from this location towards the top of the hills, we were able to see the lower part of the "Brymbo Battle", John Wilkinson's lead-smelt chimney, the upper part having been removed during the war as it was considered to be a guide for German bombers. It was here that we discovered the true wisdom of John Wilkinson and the lead miners who followed him, for they had chosen to set up their operations on a site that would in later years have built upon it a very good public house. Not only did we enjoy a refreshing drink, the meals also were excellent, and, in spite of the arrival of a wedding party, service was of the highest order. The name of the pub for future visitors? "The City Arms" - so called after the City of Chester, which is some 12 miles away.

After lunch we were transported to a section of the industrail trail, Miss Williams having taken pity on us older members, as the full trail extends to about 8 miles. Alighting at a bridge over the river Clywedog, we were able to study what remained of an early weir, and have pointed out to us where the race once was that took the water away to drive machinery. Further along we saw the old deep day-level where the water from the mine workings was fed into the river. A little further along we were guided into one end of a stone building to gaze at a large water-wheel, neglected but in surprisingly good condition. This, we were informed, was the wheel erected by John Wilkinson and believed to have been used by him to drive his boring machinery. The diameter of this wheel had at some time been increased to give additional power. The rather crude spoke extensions were very obvious. This is the machinery previously mentioned that was driven by the water flow carried from the weir in the now almost vanished race. The wheel appeared to be of the undershot type, although this was not discussed. In the same compound and but a short distance away we saw a building of octagonal shape which, it is believed, was John Wilkinson's cannon foundry. From this it would be logical to assume that any boring that took place here would have included cannon. A little further along on the opposite side of the road was the area whereon stood other iron works of John Wilkinson. The bank on the far side of the river is the one into which cannon balls were fired during cannon testing. Also at this location is a weir, the stone blocks forming the sides being secured by iron braces set in lead. Much discussion took place relating to the origin and purpose of a groove set into the top of the blocks on one side of the weir only. This groove is shallow at the top of the weir and deep at the bottom, but no one was able to offer any explanation as to its function. Another short walk along the road brought us back to the museum.

As for the museum itself, I have no intention of going into detail describing it. Suffice to say that it is a very good one. The first part is devoted to the Wilkinsons, with well laid out models of the sites and the trail. The next section contains a full size replica of a hand operated smithy complete with forge and anvil, while the remaining sections are devoted to the history of the area. This includes one produced by local school children. All I can say about this very interesting museum is "Go and see it".

In conclusion, it only remains for me to thank Miss Williams for devoting to us her undivided attention, to Maurice Hawes for organising the visit and to Elcocks for making our journey comfortable. Overall, a most enjoyable day.

HOWARD P. GRIFFITHS

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WILKINSON MONUMENT RESTORED (cont.)

The Lindale Monument is not the only reminder of Wilkinson's strong presence in Cumbria. A few miles distant, near the sadly decaying Backbarrow site, is the house known as Bare Syke, occupied by the Wilkinsons when John's father, Isaac, was working at Backbarrow. Lindale Church is just a few hundred yards from the monument : as well as containing the family vault in which Wilkinson's body is thought to have been eventually interred, there is an interesting plaque in memory of his second wife. Castle Head, which was John Wilkinson's home from about 1779 onwards, survives (though altered from Wilkinson's time) as a successful field studies centre, one of the directors, Mr. Frank Dawson, having become a great Wilkinson devotee since taking over the house some years ago. Wilson House Farm, a place where there was once a furnace and where various interesting experiments took place, has a remarkable survival in the form of a cow shed supported by eighteenth century ironwork.

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