

ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

ANNUAL CONFERENCE - SHEFFIELD 1995

Tour notes - Sunday 10 Sept

Programme

- 8 00 Breakfast
- 9 00 AIA Annual General Meeting
- 10 00 Award presentations
- 10 30 Heritage Bodies reports
- 11 00 Coffee
- 11 45 Rolt Memorial Lecture, 'The Fairbanks of Sheffield: Surveyors' Records as a Source for Regional Economic Development in the 18th and 19th Centuries' - David Crossley
- 13 00 Lunch
- 14 15 Walks leave Ranmoor House - see below
- 19 00 Dinner
- 20 00 'Thomas Newcomen and the Newcomen Engine' - John Allen
- 21 30 Videos of Sheffield trades

Walk 1 - Porter Valley and Shepherd Wheel

Walk leader - Harold Taylor

A gentle walk through suburban streets, parks and woods. Most paths surfaced but please wear sensible shoes. Tea available at Forge Dam. Return by bus from Fulwood.

From Forge Dam, where the walk ends, the little River Porter or Porter Brook was used by water powered industry over most of its length until it falls into the Sheaf under Sheffield Station. This walk passes the dams and slight remains of a number of these water powered sites. Most were cutlery grinding wheels but there was a saw works built by Thomas Boulsover, the inventor of Old Sheffield Plate, at Wire Mill Dam, and a small forge at Forge Dam.

The main attraction, though, is Shepherd Wheel, the only one of Sheffield's water powered cutlery grinding wheels to be preserved complete as it was in its working days. Its recorded history goes back at least to 1584 and its name comes from a Mr Shepherd who was renting it in 1794. There are two 'hulls' (grinding workshops), each with several 'trows' or 'troughs' for the grinders. It is powered by an overshot water wheel, 5.5m in diameter. It last worked commercially in the early 1930s. The predecessor of the SYIHS arranged occasional demonstration openings until 1940. Demolition was threatened in 1957 but the Council for the Conservation of Sheffield Antiquities persuaded the City Council to keep it as a site museum, and itself did much of the restoration. Two more recent threats to close it as an economy measure have been averted after local and national protests including, on the first occasion, one from the AIA.

Walk 2 - Sheffield Canal

Walk Leader - Graham Hague

Coach A to Sheffield Canal Basin. Walk along unsurfaced towpath; please wear stout shoes. Return by Supertram to either Transport Interchange or Commercial Street stop - leader will have tickets. Walk from there to Transport Interchange itself and Coach A back to Ranmoor House.

The head of the River Dun Navigation at Tinsley (1751) was linked to Sheffield by a turnpike road until the Sheffield Canal was opened in 1819. At the canal basin the fine Terminal Warehouse (listed II*) was built in 1819, the Grain Warehouse at right angles to it c1880, and the steel framed Straddle Warehouse spanning the canal in 1895. Commercial traffic ended in the early 1970s and these fine buildings became increasingly derelict until their current restoration for mixed uses.

After looking at the Canal Basin the party will walk along the towpath. There are two original brick bridges, and a stone aqueduct at Darnall, all of 1819. Works were built along the Canal and the party will see what is left of the Sheaf Works (1822-6 for cutlery), the Canal Works (mid 19thC for steel and files), Samuel Meggitt's Bone Mill (pre 1865), Firth's Iron Wharf (c1860) for unloading the Swedish iron bars that were needed to make cementation and crucible steel, and the Baltic Steel Works (1854 on) with a typical crucible shop, among others.

Walk 3 - Kelham Island Conservation Area

Walk Leader - Peter Machan

Coach B to West Street. Walk almost all on roads, but please wear comfortable shoes. Return by Supertram from Shalesmoor to West Street - leader will have tickets - and Coach B from there to Ranmoor House.

Parts of the city centre stand on a hill above the River Don. The north edge of this hill around Hollis Croft and Garden Street was developed as housing and workshops for cutlery workers in the early 18thC. The town then spread down the hill and over the level area by the Don in a jumble of mostly poor housing and small and larger works. Much of it has been redeveloped since World War 2 but some important old works survive. The lower part of the area was made an industrial Conservation Area in the early 1980s and the City Council has had some successes in refurbishing it and bringing new firms in without losing its historic character, but also some disappointments.

The party will see the urban 'industrial hamlet' of c1850 at Well Meadow, which includes houses and the buildings of two small crucible steel and file works, and the complete cementation furnace in Doncaster Street (1848) and the remains of two in Bower Spring (c1828) - there is only one other survivor in Britain. Works in the Conservation Area include Green Lane Works, a relic of the stovegrate foundry trade, with Henry Hoole's triumphal arch entrance of 1860; James Dixon's four acre Cornish Place works for silverware and Britannia metal (1822 on), recently damaged by fire; and Ibbotson's Globe Works of 1825 with its fine Classical facade (Ibbotson was mentioned in Engels' 'Condition of the Working Class in England'), restored after long neglect in 1989-90 as workshops and offices, but now facing financial problems.

Walk 4 - Cutlery workshops

Walk leader - Victoria Beauchamp

Coach B to West Street. Walk all or mostly on roads, but please wear comfortable shoes. Return in Coach A from Transport Interchange to Ranmoor House.

The walk will pass through two of the main cutlery areas, first W and SW of the city centre and then SE and E on the slope down from the city centre to the River Sheaf. The latter area was laid out as a planned development on the former Alsop Fields in 1771, but only built up gradually over a century. Most of the works and associated houses have gone, but the survivors, chiefly larger works, illustrate the buildings used by the industry. There are still a number of cutlery, silverware and pewter firms in the area, mostly small by today's standards, using both old and new buildings.

Buildings on the walk include the fine mid-19thC Taylors Eye-Witness Works (where Kitchen Devil knives are made) and the Beehive Works, both in Milton Street; the Sylvester or Granville Works in Sylvester Street (1875, with derelict side block of c1840); and a series of works along Arundel Street, of which the most interesting are Wall Kay (early 19thC), Butcher's Wheel (1820s and 50s) and Slaters' Venture Works (1820s). This is now offices but the others mentioned are still used, or partly used, by cutlery firms.

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Tour notes - Monday 11 September

Programme

8 00 Breakfast
9 00 Coaches leave Ranmoor House
9 30 Arrive Rockley
10 15 Leave Rockley
10 30 Arrive Silkstone Garden Centre. Walk to Low Mill Furnace and back. If time permits, visit Huskar Pit Monument in churchyard; church (memorials to Joseph Bramah) will be open
12 00 Leave Silkstone
12 15 Arrive Worsbrough. Coach A Lunch at Red Lion
Coach B Visit to Worsbrough Mill Museum
13 15 Coach A Visit to Worsbrough Mill Museum
Coach B Lunch at Red Lion
14 00 Leave Worsbrough
14 15 Arrive Elsecar
15 30 and later - Walks round Elsecar village
16 30 Coaches leave Elsecar
16 45 Brief stop at Westfield Engine House, Rawmarsh
18 00 Return to Ranmoor House
18 30 Dinner
19 30 'Planning, conservation and industrial monuments in the Lower Don steel area' - Simon Ogden
20 45 Introduction to videos of Sheffield trades - Ken Hawley

Coach guides - Graham Hague and Derek Bayliss
Guide at Rockley - David Crossley
Guide at Silkstone - Denis Ashurst
Walk leader at Elsecar - John Hislop, Conservation Officer, Barnsley MBC

The day's programme includes both the charcoal iron furnaces that survive in South Yorkshire, and all three of the Newcomen engine houses. We shall probably travel out by the A61 past the temporary tram terminus at Shalesmoor, the Sheffield Wednesday football ground at Hillsborough and the steelworking village of Grenoside. After we cross the M1, we pass the 1902 Tankersley Mines Rescue Station, believed to be the earliest of its kind. We leave the A61 in Birdwell by the 1775 obelisk indicating 3 miles to Wentworth Castle.

Rockley Furnace and Engine House

The charcoal furnace was built between 1698 and 1704 and worked until c1741 as part of the operations of the 'Spencer Syndicate'. It was used again, possibly c1790, to make gun castings. Now owned by the SYIHS.

The Newcomen engine house has an 1813 datestone and drained an iron ore mine (possibly also for coal) which is marked by earthworks in the field to the S. Engine moved to the Chapeltown area c1870 for further use. Site now owned by SYIHS. Cutting E of Engine House is trackbed of Pilley Hills Colliery branch (c1832) of horse and cable worked Worsbrough Railway.

After leaving Rockley we pass the head of an incline on the 1820 main line of this railway (R), have views on L of Wentworth Castle (E front c1710 for Earl of Strafford), pass a deer farm on R, and go through the linen weaving and mining village of Dodworth.

Silkstone

Silkstone Garden Centre, where we park, is the site of a glassworks set up by the Pilmay family c1650. A building by the road probably includes the remains of one of the two glasshouses. It is being investigated by Denis Ashurst, a leading local archaeologist and author of 'The History of South Yorkshire Glass' (J R Collis Publications). South Yorkshire has a continuous history of glassmaking since then and there were 25 glassworks in the 19thC, mainly for bottles, jars and other containers.

We walk to Low Mill Furnace along the trackbed of the horse-worked Silkstone Railway (1809-60) which carried coal down to the head of the Barnsley Canal at Barnby Basin. Note remaining stone sleeper blocks, and a widened bridge over a stream.

Low Mill Furnace appears to be an 18thC charcoal iron furnace rebuilt for coke, but there are a number of puzzles about it. It is unusual in retaining its (later) casting house. We are visiting it by courtesy of Mr Raymond Love who has restored it.

The Huskar (House Carr) Pit Memorial in Silkstone churchyard commemorates 26 children aged 7 to 17 who were drowned by an inrush of storm water to the colliery in 1838. A booklet about it is on sale in the Church, which is open by courtesy of Rev Mr Birch, Rector.

Joseph Bramah (1749-1814), engineer and inventor, eg of a water closet, improved locks, and the hydraulic press, was born at Stainborough Lane Farm near Silkstone. He trained Henry Maudslay and other leading mechanical engineers of the early 19thC. There are modern memorials to him in the Church.

Worsbrough Mill Museum

A water powered corn mill of c1625 on a Domesday site. Steam mill, added 1843, worked to 1922, and water mill to 1960s. Stone buildings, cast iron overshot wheel, 1911 Hornsby oil engine from Sykehouse windmill in the steam mill. Small dam beside the much larger Worsbrough canal reservoir. Since 1976 run as a museum by Barnsley Council in conjunction with their Worsbrough Country Park. The 'Wagon Road' by the Mill is the trackbed of the Worsbrough Railway of 1820.

Elsecar

There will be an introductory talk about the Elsecar site and its development as 'Elsecar at Barnsley'. The party will visit the Newcomen engine, where space is limited, in small groups at set times. We have also paid for admission to the PowerHouse, a hands-on science display.

'The Elsecar People', a small history display, charges £1.00 (concessions 60p) which you will need to pay yourself. The National Bottle Museum, a private collection of bottles (many made in the area), packaging and advertising, will be open and is free. The Hot Metal Press will not be open. There are craft workshops and a cafe. The steam railway is not yet open, and the Newcomen engine is being opened specially for our party.

For historical notes on the Newcomen engine and the Workshops please see the notes for Saturday, Coach B.

Much of Elsecar village was largely built by the Earls Fitzwilliam for their colliers and the workers at the Iron Works. It includes rows of good quality cottages for the period such as Old Row (1800), Reform Row (1837), and Cobcar Terrace (c1860). There is an impressive Miners' Lodging House of 1853, a steam corn mill of 1841-2, a National School of 1852 and a former market hall, Milton Hall, of 1870. It is now a Conservation Area and the cottages have been sympathetically modernised.

John Hislop's walk will leave at 15 30. Graham and/or Derek will lead shorter walks around 16 00 for those who are in the later groups to see the Newcomen engine or who prefer to have a little more time at the Workshops.

Westfield Engine House, Rawmarsh

1823 Newcomen engine house for Earl Fitzwilliam. The engine, claimed to be the most efficient atmospheric engine ever built, worked until 1926 and was scrapped in 1934. Pumping with electric pumps continued until recently. The boiler house and a workshop remain, and stables opposite have been converted to houses.

The route back will depend on traffic but we hope to point out some of the historic industrial buildings and sites round Rotherham town centre.

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Tour notes - Tuesday 12 September

Programme

8 00 Breakfast
9 00 Coaches leave Ranmoor House

Coach A

Party 1 -
9 30 Avesta Cyclops Works
10 15 Steel history walk
11 00 Gripple Ltd, West Gun Works

Party 2 -

9 30 Steel history walk
10 15 Gripple Ltd, West Gun Works. Coach to -
11 00 Avesta Cyclops Works

Coach B

9 30 Gripple Ltd, West Gun Works. Coach to -
10 15 Avesta Cyclops Works
11 00 Steel history walk

12 00 Lunch (both parties), The Carbrook

Coach A

13 00 Leave The Carbrook
13 30 Sharrow Mills
14 30 Leave Sharrow Mills
15 00 Visits in cutlery area
16 30 Coach leaves for Ranmoor House

Coach B

13 00 Leave The Carbrook
13 30 Visits in cutlery area
15 00 Leave for Sharrow Mills
15 15 Sharrow Mills
16 15 Coach leaves for Ranmoor House

18 30 dinner

20 00 'The Woodhead Route' - Jon Whiting and Graham Hague
21 30 Videos of Sheffield trades

Coach guides (morning) - Douglas Oldham and Peter Drew
(afternoon) - Peter Drew and Victoria Beauchamp
Walk leader (morning) - Derek Bayliss

The walks are mainly on roads but please wear stout shoes - also needed for the factory visits.

Lower Don steel area

See tour notes for Saturday, coach C, for historical introduction. The walk will concentrate on the area between Savile Street and Carlisle Street where Cammells, Firths, John Brown and four other steel firms set up between 1845 and 1860 either side of the Sheffield and Rotherham Railway. Little now remains of their works but there are some landmarks. We shall pass the Brown Firth Research Laboratories of 1908 where Harry Brearley discovered stainless steel in 1913, and if time permits we may see a small crucible steelworks of c1900 and a crankshaft forge of the 1880s..

Avesta Cyclops Works

We do not yet have clearance to take photographs here. **NO PHOTOGRAPHS UNLESS PERMISSION IS GIVEN PLEASE.**

In 1845 Cammells were the first Sheffield steel firm to move to a rail linked site. This, the original Cyclops Works, was in Savile Street and has been cleared, but they later expanded north of the then railway and this part is now Avesta's works for armour plate and related products. This year it is celebrating the 150th anniversary of the Cyclops site. The older buildings mostly date from World War 1 or later but a small part is c1900. The tower in Carlisle Street houses a substation and marks the site of the works generating station. A hydraulic power plant of c1936 supplies a 3000t press of c1903 by Henry Berry of Leeds and an 8000t press of 1912 by Davy, Sheffield. Cammells had the world's first hydraulic forging press in 1863.

We are grateful to Mr J C Dyson, Business Manager, for agreeing to the visit. Bob Bishop and Douglas Oldham will show us round.

Gripple Ltd. West Gun Works

The Works was built in 1863-4 as a gun shop for Firths, making heavy ordnance. It originally had two 25t steam hammers with 160t cast iron anvil blocks, which were cast at the adjoining Midland Works of John Stanley & Co, now gone. The Works has recently been refurbished for Gripple Ltd, and was a joint winner of the RICS annual award for commercial building conservation.

The Gripple is a simple but ingenious device for holding two strands of wire together under tension. It was invented by Hugh Facey in 1988, won the Prince of Wales' Innovation Award and appeared on 'Tomorrow's World', and was given the Concours Lapin's 'Grand Prix du President de la Republique', a prestigious French award previously given to the inventors of the parachute and the contact lens.

We are grateful to Hugh Facey for agreeing to our visit and to Andy Davies who will be showing us round.

The Carbrook PH

Apologies for calling this The Carwood on the programme. It is a much altered early 17thC manor house, Carbrook Hall, which was the home of the Bright family. They were involved in the lead trade and Col. John Bright was active on the Parliamentary side in the Civil War. One room still has timber panelling and a fine plaster ceiling, but may not be open.

Sharrow Mills

Wilson & Co (Sharrow) are independent producers of snuff and can still use water power for grinding, though most is now done by electric power which was introduced in 1956. The Mills with their dam are an island of quiet and history in a busy inner suburb - they are hidden behind a Tesco. The site was a cutlery grinding wheel by 1604. Thomas Wilson, shearsmith, leased it in 1738 and Joseph Wilson introduced snuff grinding in the 1740s. A new snuff mill was built in 1763 and steam power added in 1796. There is an unusual 1750s tail goit or race, culverted under the River Porter to give a greater fall at the wheel.

We are grateful to Mr Archdale, Chairman, and Mr Lockyear, Managing Director, for making the visit possible.

Cutlery visits

These are still being sorted out at the time of writing. We hope that everyone will have a chance of a visit but we are not yet sure. The visits will be in small groups with limits on numbers; please help the organisers with this. Some of the works are cramped, noisy and dirty. Please pay attention to safety.

So far we have arranged for groups to visit -

A R Wentworth (Sheffield) Ltd, making pewterware in a modern works
I Gibson & Son Ltd, making pewterware in an older works

From the late 18thC Sheffield was a centre for the Britannia Metal trade. Britannia Metal was an improved form of pewter, said to have been developed here by James Vickers c1770.

Butchers Wheel

We hope to have a look inside Butchers Wheel with some groups at least. It was built as an edge tool works by W & S Butcher who were active in developing the export trade to North America. They set up in 1819 in Eyre Lane at the back of the present site, and some of the buildings there appear to date from then. In the early 1850s they acquired the Arundel Street side of the site and built the bulk of the present works, which stands round a courtyard with chimney and boilerhouse in the middle. Butchers were here until after World War 2 but it is now used for small businesses - including a scissor hardener, though he cannot be here today - and much of it is empty.

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Tour notes - Wednesday 13 September

Programme

8 00 Breakfast
9 00 Coaches leave Ranmoor House

Coach A

9 45 Arrive at Stocksbridge Steel Works for tour
12 30 Lunch at the Steel Works
13 30 Coach leaves for Dunford Bridge (Woodhead Tunnel) and Upper Don tour
17 30 Coach returns to Ranmoor House

Coach B

am Upper Don tour and Dunford Bridge (Woodhead Tunnel)
13 00 Arrive at Stocksbridge Steel Works
13 15 Lunch at the Steel Works
14 00 Tour of Steel Works
16 45 Coach leaves Stocksbridge
17 30 Coach returns to Ranmoor House

18 30 Dinner
19 30 'Barnsley Linen' - Harold Taylor

Coach guides - Coach A: morning Victoria Beauchamp, afternoon Jon Whiting
Coach B: morning Jon Whiting assisted by Graham Hague, afternoon Peter Drew

Please wear stout shoes; they are needed for the works visit.

Please note that the works tour at Stocksbridge cannot be offered to people with limited mobility, for safety reasons. The tour is a long one and includes steep metal stairs which would need to be cleared quickly in an emergency. The tour is also not offered to people with heart pacemakers, because of the strong electro-magnetic fields produced in electric melting. If you are in either of these groups, please let Derek Bayliss know before Wednesday and join Coach B. You will see the video at the start of the visit and then a car tour will be provided to places of interest around Stocksbridge.

Stocksbridge Steel Works

We shall see a video about the Works and then rejoin the coach to go to Top Yard to begin the tour, which is made in small groups with guides who are usually retired employees.

Please note **NO PHOTOGRAPHS MAY BE TAKEN ANYWHERE ON THE SITE**, outdoors or in. This is the firm's rule and a condition of our visit, and we ask you to observe it.

Crucible steel was used to make high quality steel wire. Stocksbridge is unusual as a steelworks which developed from a wire mill. Samuel Fox began to make wire for hackle and gill pins for the textile trade in a former cotton mill at Stocks' Bridge on the Little Don in 1841. A wheelpit was found at the N end of the South Office Block during alterations in 1991. He made umbrella and crinoline wire, and in 1852 patented the Paragon folding umbrella frame with U cross-section ribs, ancestor of all modern folding umbrellas. The works began

to make crucible steel c1860 and was one of the first to use the Bessemer process in 1862. It rolled railway rails from 1863 (but had no rail link until Fox built the Stocksbridge Railway in 1877), and later made tyres, axles and springs. From 1899 to the 1960s it had open hearth furnaces. In 1920 it pioneered stainless steel wire. The town of Stocksbridge grew up around, and for, the works.

Now most of the works is part of British Steel Engineering Steels. It has two electric arc furnaces, a continuous caster and rolling mills, and makes alloy, stainless and special steels. Wire and narrow strip (eg razor blade strip) are still made here but by separate firms, Fox Wire and Avesta, and we shall not see them.

The oldest buildings are the 1868 General Office of fireclay bricks, the North Office Block built in 1864 for fabricating umbrella frames, and the South Office Block built in 1877 for wiredrawing. Most of the site has been rebuilt several times as production methods changed.

We are grateful to Trevor Lodge, Editor of the Engineering Steels edition of 'Steel News', for arranging our visit, and to Lisa Martin of the Stocksbridge Works Training Department for her help. Trevor has done a great deal of research into the history of the Works.

Woodhead Tunnel

The Sheffield, Ashton-under-Lyne and Manchester Railway was the second railway across the Pennines. Joseph Locke, its engineer, usually avoided building tunnels but had no alternative here, and the tunnel of 3 miles 22 yards under the Pennine watershed from Woodhead to Dunford Bridge (or vice versa, as we are in Yorkshire) was almost certainly the longest railway tunnel in the world when it was built. Work began in 1839 and was remarkable both for the engineering difficulties and for the problems of employing up to 1500 navvies in a wild moorland area: see Terry Coleman's 'The Railway Navvies'. A single line tunnel was opened on 22 Dec 1845 and 1995 is thus the tunnel's 150th anniversary. The railway had already been opened to both ends of the tunnel with a horse bus link between them, so the tunnel completed the line between Sheffield and Manchester. A parallel tunnel was built in 1847-52. Both were closed in 1954 when a new double track tunnel was opened for the Manchester - Sheffield and Wath 1500v DC electrification. The line and the new tunnel closed to passengers in 1970 and completely in 1981. The earlier tunnels now carry a transpennine electricity cable and a narrow gauge railway for access. An observatory and ventilators survive on the moors.

The coach tour will follow parts of the route between Sheffield and Dunford Bridge, and features such as the listed coal drops on the site of the original Penistone station and the 1850 Penistone Viaduct on the line to Huddersfield will be seen. The Penistone area was a centre of the domestic woollen industry; Penistone has a Cloth Hall of 1768 and there are handloom weavers' cottages with their characteristic long top windows in Thurlstone. Nearer Stocksbridge the coach passes Sheffield's Langsett (1905) and Underbank (1907) reservoirs, and the course of the construction railway to Langsett can still be seen.

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Tour notes - Thursday 14 September

Programme

- 8 00 Breakfast
- 9 00 Coach leaves Ranmoor House
- 9 45 Walk from Old Wheel to Low Matlock in the Loxley Valley
- 11 00 Visit to barworth Flockton, Low Matlock Rolling Mill
- 12 00 Coach to Malin Bridge
- 12 30 Visit and picnic lunch, Mousehole Forge
- 14 00 Coach leaves for Sheffield station and Ranmoor House

This is the end of the programme. We hope you have found it enjoyable and interesting.

Coach guide and walk leader - Jean Cass. Jean is one of the authors of 'Water Power on the Sheffield Rivers', edited by David Crossley; she also knows a great deal about the history of water supply in Sheffield and the Great Sheffield Flood of 1864.

The walk is about 1½ miles on easy footpaths but please wear suitable shoes in case of mud.

The coach will leave Sheffield by the A57 Snake road towards Manchester, designed by Telford and opened in 1821. The snake in question is part of the crest of the Dukes of Devonshire. We pass on the L the Rivelin water filter house of 1914 and then the Rivelin reservoirs of 1848. Hollow Meadows, in trees on the R, was built in 1848 as a base for land reclamation by unemployed men from Sheffield workhouse, and later used as a truant school and a mental hospital; it has been turned into 'residential units' (houses).

At Moscar we turn R and soon join the course of Mortimer Road, an unsuccessful turnpike from Grindleford in Derbyshire to Penistone, built in the 1770s with steep ascents and descents and given up early in the 19thC. We see Strines reservoir (1871) on the R and pass the remote Strines Inn. Then Dale Dike reservoir is on the L. The dam of the first reservoir here collapsed catastrophically on 11 March 1864, flooding down the Loxley valley to Sheffield and killing some 240 people. It led to a major enquiry into the circumstances and the safety of earth dams. A new dam was built upstream in 1875 but not used until 1887. Beyond Low Bradfield we run beside Damilask reservoir (1867, not commissioned until 1896).

We begin our walk at Old Wheel and visit a series of water powered sites constructed before 1750 as cutlery grinding wheels by local cutlers who took leases from the Duke of Norfolk. In the early 19thC some were converted to tilts and forges or for razor grinding. We pass Olive Wheel where two waterwheels survive (just), in a poor state and hidden by vegetation. Part of this site became a paper mill c1830 and was rebuilt as one after the 1864 Flood.

Low Matlock Rolling Mill

PLEASE DO NOT TAKE PHOTOGRAPHS IN THE ROLLING MILL UNLESS PERMISSION IS GIVEN.

Cutlers' grinding wheel 1732, forge c1800. Rebuilt as rolling mill, datestone 1882. Water power used until 1956, wheel survives. Now electrically powered, two sets of rolls. Barworth Flockton, who have a modern steelworks and rolling mill in Ecclesfield, use it for special work. It is one of only three or four works in Sheffield still doing hand rolling - red hot bar is fed into the rolls, taken out and transferred by hand held tongs. We hope to see this being done.

For safety reasons please keep well out of the working area.

We are grateful to Mr Ted Allison, Works Manager, for agreeing to this visit.

The coach will take us to Malin Bridge where we shall have a quick look at the derelict wheel of the Corn Mill, one of Sheffield's very few undershot wheels. There was a grinding wheel here by 1739 and a sawmill for a firm of millwrights in the second half of the 19thC; it became a corn mill very late, by 1905. The buildings are now a restaurant. Then we walk the short distance to Mousehole Forge.

Mousehole Forge

Mousehole is an anvil forge on the River Rivelin, which joins the Loxley just below here. Footpaths lead upstream for more than two miles past a series of water powered sites, mostly cutlery grinding wheels; most of the buildings have gone but many weirs, watercourses and dams remain. The Mousehole site was a lead smelter and then an iron forge in the 17thC. It was making wrought iron from pig in 1717. The Cockshutts (cf Wortley Top Forge) were tenants from the 1740s to the 1790s. By the early 19thC it was specialising in anvils, vices and hammers. M & H Armitage were here from 1827 and their name and trademark, a mouse + HOLE, were used until it closed in 1933. It was largely demolished in World War 2 and then left derelict, but the remaining buildings have been restored, and the site cleared and conserved, by Julia and John Hatfield, who now live in the restored house. There were four waterwheels, two for forge hammers, one for blowing and one for grinding.

Julia and John hope to be there to welcome us and introduce the Forge to us. We are grateful to them for the visit. Ken Hawley will show us his collection of anvils which is kept here, and we can explore the site and eat our packed lunches (under cover if it rains) before we return to the coach and go our ways.