North East Derbyshire Industrial Archaeology Society

NEDIAS Newsletter No. 56 – November 2014

Price: £2.00 (Free to Members)

Visit to the Valley of Stone

Pat Pick

Fifteen members enjoyed a wonderful day at the Valley of Stone in the Rossendale valley, as guests of the Friends of the Valley of Stone, a visit organised for us by Marrian Tattershall.

From the late 18th Century to the time of the First World War quarrying was a major industry in Rossendale. The quarries employed thousands of men and Rossendale stone was exported in huge quantities throughout the UK and beyond. Parts of the site are classified as a Geological Site of Scientific interest. Whilst the general process that gave rise to sedimentary rocks was the same over the whole of the Pennines, conditions would vary from place to place giving rise to local variations. Rossendale had deep beds of hard sandstones known as Haslingden Flags. This stone has the hardness and silica content equivalent to granite and was the reason for the quarrying in Rossendale.

Quarrying grew throughout the Victorian times. Railways played an important part in the transport of the stone from the 1840s. This meant that the stone could be more widely transported to various places including Manchester, Liverpool, Birmingham, and London for use in Trafalgar Square. In the nineteenth century there was a high demand for hardwearing flag stones including flags for mill floors, pavements, railway platforms etc. Unfortunately this stone was too hard for building stone so gritstone was imported from Derbyshire. At its height in the 1890s/1900s over 3,000 men were employed in the industry.

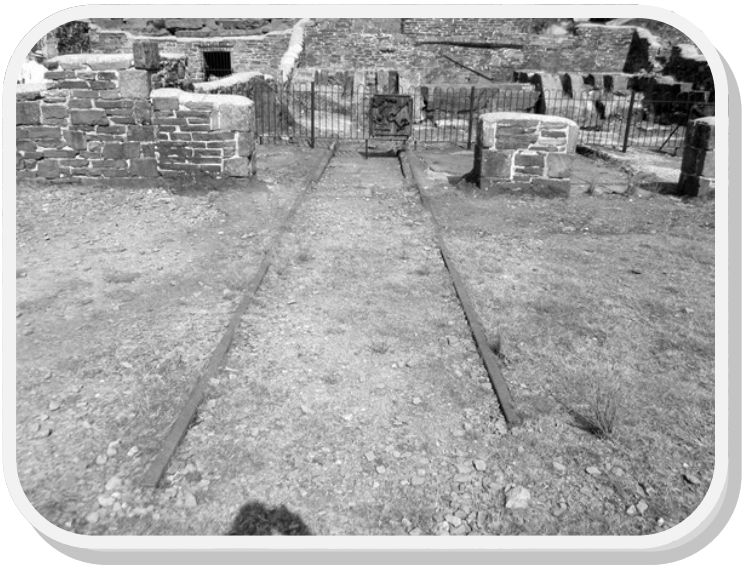
Figure 1: Lunch at the Kimberley Club

We met our hosts at Kimberley working men's club. Time has stood still at the club, no electricity and only toilets installed in 1999. A tiny club room packed with information on the quarry industry. An unforgettable experience especially for the men as beer was £1.50 a pint. A buffet was provided, before setting out by car to Lee quarry, the main access point for the Valley of Stone.

We walked up hill on the tramway, built around 1880 and abandoned about 1903 to the quarry. It was like entering a miniature Grand Canyon. After looking at the remains of various features including crane bases and loading bays, our interest turned to the remains of the Saw Shed. It was a 2 bay building with 2 frame saws, the saw of one was displayed on the wall along with other artefacts recovered from the site. It had recently undergone major restoration work.

We walked through the quarry looking at more industrial remains. When the best layers of flag (called lonkey) are deeper below surface tunnels are driven into the rock and large scale pillar and stall mining was carried out.

ABOVE: Figure 2: NEDIAS at the rescued Saw Shed



On the way we stopped to look at a modern art installation before retracing our steps down the tramway.

Far too much to see on one visit, and this is only one of several restored quarries extending over 5 miles and upwards of 1,000 feet.

It was a glorious sunny day and we must thank our guides Arthur and Marrian for making it a memorable day.

LEFT: Figure 3: Rail access for blocks

WHAT'S ON?

NEDIAS Lecture Programme

Meetings are held at: St Thomas' Centre, Chatsworth Road, Brampton (opposite Vauxhall/Bristol St Motors) S40 3AW. There's plenty of parking in their own car park, including disabled spaces, as well as on-road parking in front of the Church. All meetings commence at 7:30pm.

Monday, 8th December 2014	**Members' Meeting.** Short talk from Keith Sherwin on the strange history of man-powered flight? And of course our usual mince pies.
Monday, 12th January 2015	**Philip Riden: 'Canals and the coal trade in the East Midlands'**
Mon 9th February 2015	**James Hawksley: "The Lea Wood project"**
Mon 9th March 2015	AGM plus … **Jim Nicholson: "The James Chesterman Company of Sheffield, makers of measuring devices"**
Mon 13th April 2015	**Norman Taylor: 'The History of the Pinxton Porcelain Factory'**

Mon 11th May 2015	**Ken Granger. "From Sheffield Victoria to Chesterfield Central on the Manchester, Sheffield & Lincolnshire Railway" THE DAVID WILMOT MEMORIAL LECTURE**

Other Diary Dates

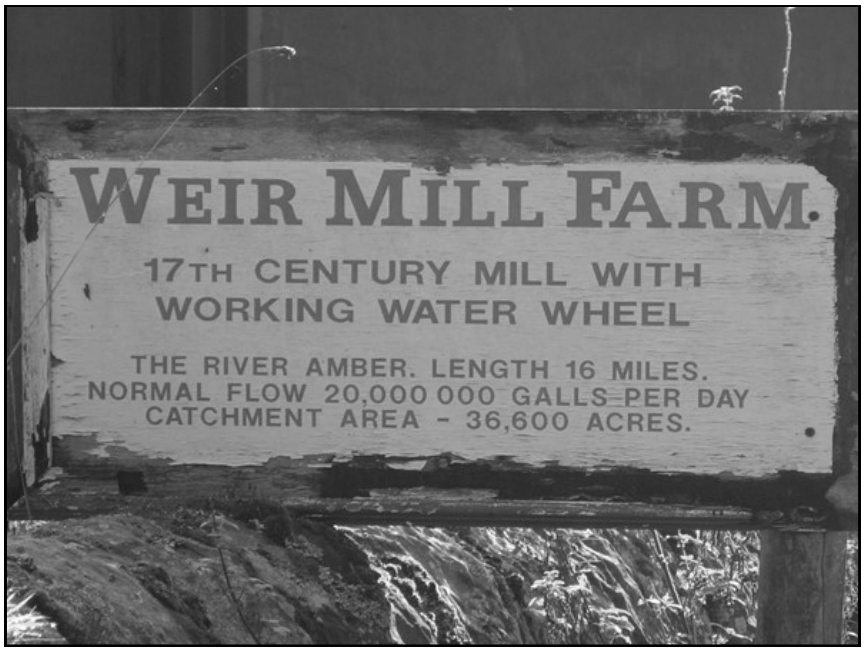
Currently on until July 2015	Current exhibition at Kelham Island: **"War Work – Sheffield Industry and WW1"**. Tells the story of the impact of war upon Sheffield's industries and their workers: now until July 2015
Tuesday, 11th November 2014	**"Made in Chesterfield" Quiz**. Chesterfield Civic Society. Eyre Chapel, Newbold Road., Chesterfield. 7:30pm
Thursday, 13th November 2014	**Mark Slack: "Henry Cavendish".** A look at the achievements of this famous scientist, the third son of the 2nd Duke of Devonshire. Gothic Warehouse at Cromford Mill, 7:30pm – 01629 825995.
Monday, 17th November 2014	**Howard Smith: "The Story of the Snake Road".** SYIHS meeting at Kelham Island 7:30pm. For info, Derek Bayliss on 0114 230 7693
Wednesday, 19th November 2014	**John Harvey: "Dronfield's Victorian Past".** Dronfield Civic Society meeting at St Andrew's Church Pentland Road Dronfield starting at 7:30pm
Thursday, 20th November 2014	**A Brush with Sir Nigel** – Stewart Donohoe. A look at each of the 100 class 60 locomotives built, along with each of their same numbered steam counterparts. 7:30pm Barrow Hill Roundhouse Centre. Info: www.barrowhill.org
Saturday, 22nd November 2014	**South Yorkshire Archaeology Day 2014.** 10:00am to 4:30pm at the Showroom Cinema, Paternoster Row, Sheffield. Organised by the South Yorkshire Archaeology Service. Fee £12, concessions £6. Details from David Marsh, 0114 273 4223 Booking forms at www.sheffield.gov.uk/syas.
Friday, 28th November 2014	**Cliff Lea: "Derbyshire Oil Wells of 1918".** DAS meeting at St Mary's Church, Darley Lane, Derby. 7:30pm
From Saturday, 29th November 2014 – March 2015	**Derby Museum & Art Gallery: Heath Robinson Exhibition**
Saturday, 10th January 2015	**Derbyshire Archaeology Day at the Chesterfield Pomegranate.** Tickets from Chesterfield & Buxton Museums, the theatre and usual information centres
Monday, 19th January 2015	**Glyn Davies: "The archaeology of an iron works: Kitson's Monkbridge Iron Works, Leeds"**. SYIHS meeting at Kelham Island 7:30pm. For info Derek Bayliss on 0114 230 7693
From Monday, 19th January to 15 March 2015	**"Seduction of Glass".** Exhibition about glassmaking industry in south Yorkshire – the second largest industry in that area after coal - at the Experience Barnsley Museum, Barnsley Town Hall.

Saturday, 7th February 2015	**"Hidden Secrets of Bolsover"** Bolsover Civic Society, Parish Rooms, Bolsover 12:00 noon, £8.00 including a buffet lunch. 01246 822793, bernard.haigh@yahoo.co.uk
Thursday, 13th February 2015	**Chas Arnold: "Robert Blincoe, Ellis Needham and Litton Mill". A look at this mill which became notorious for its cruel treatment of workers.** Gothic Warehouse at Cromford Mill 7:00pm, 01629 825995, £7.50.
From 10th to 22nd March 2015	Wingfield Railway Group's **Model Railway Exhibition** at Cromford Mill, every day 11:00am – 4:00pm.

Mills on the Amber

Derek Grindell

At the first NEDIAS meeting of 2014, Richard Patilla delivered a talk on a local history topic, which he had researched virtually on his own door step. Entitled "Amber Mill", he related the story of the development of a cotton spinning mill within his own parish of Shirland in the late 18th century. Fortuitously, only a few weeks previously, I had acquired a copy of *King Cotton*, a fascinating collection of essays published in 2009 by Crucible Books in association with The Chetham Society and dedicated to the late Professor Douglas A. Farnie of Manchester University's Economic History Dept. He was either author or co-author of six books, ranging from *East and West of Suez. The Suez Canal in History, 1854-1956 (1969), The English Cotton Industry and the World Market, 1815-1896 (1979), The Manchester Ship Canal and the Rise of the Port of Manchester, 1894-1975 (1980),* W. H. Chaloner, *Industry and Innovation. Selected Essays (1990), Region and Strategy in Britain and Japan. Business in Lancashire and Kansai, 1890-1990* to *The Fibre that Changed the World. The Cotton Industry in International Perspective, 1600-1990s (2004)*. Over the last 48 years of his professional career Professor Farnie contributed 50 papers to periodicals and the journals of learned societies. It was fitting therefore that his last contribution was to The Oxford Dictionary of National Biography. Part 1 of *King Cotton*, entitled *The Cotton Industry*, consisted of six papers. The sixth, written by John Mason, was intriguingly called *Enterprise, opportunity and bankruptcy in the early Derbyshire cotton industry*, a title which neatly encapsulates the story of four mills, which were powered by the river Amber, and its denouement.



A sign still displayed at Park Mill, Wingfield Park, confirms its earlier origins on the Hardwick Estate

By the end of the 18thC most locations best suited for water powered spinning had been exploited and their occupants faced an uncertain future not only from urban competitors harnessing steam power but also the economic uncertainties caused by the French Revolution.

The Derwent Valley had seen the opening of Lombe's Silk Mill in Derby (1721), the establishment of Arkwright's Cromford Mills (1771 & 1776-77), together with developments at Belper (1776-77), Milford (1781) and Darley Abbey (1782). By 1788, across Great Britain, more than 200 mills based on the Arkwright model had been established. Despite this proliferation of ventures, however, there was a residual demand for sites not only to the west of the Pennines but also to the east as exemplified by the emergence of a nascent small scale cotton industry on the river Amber, a

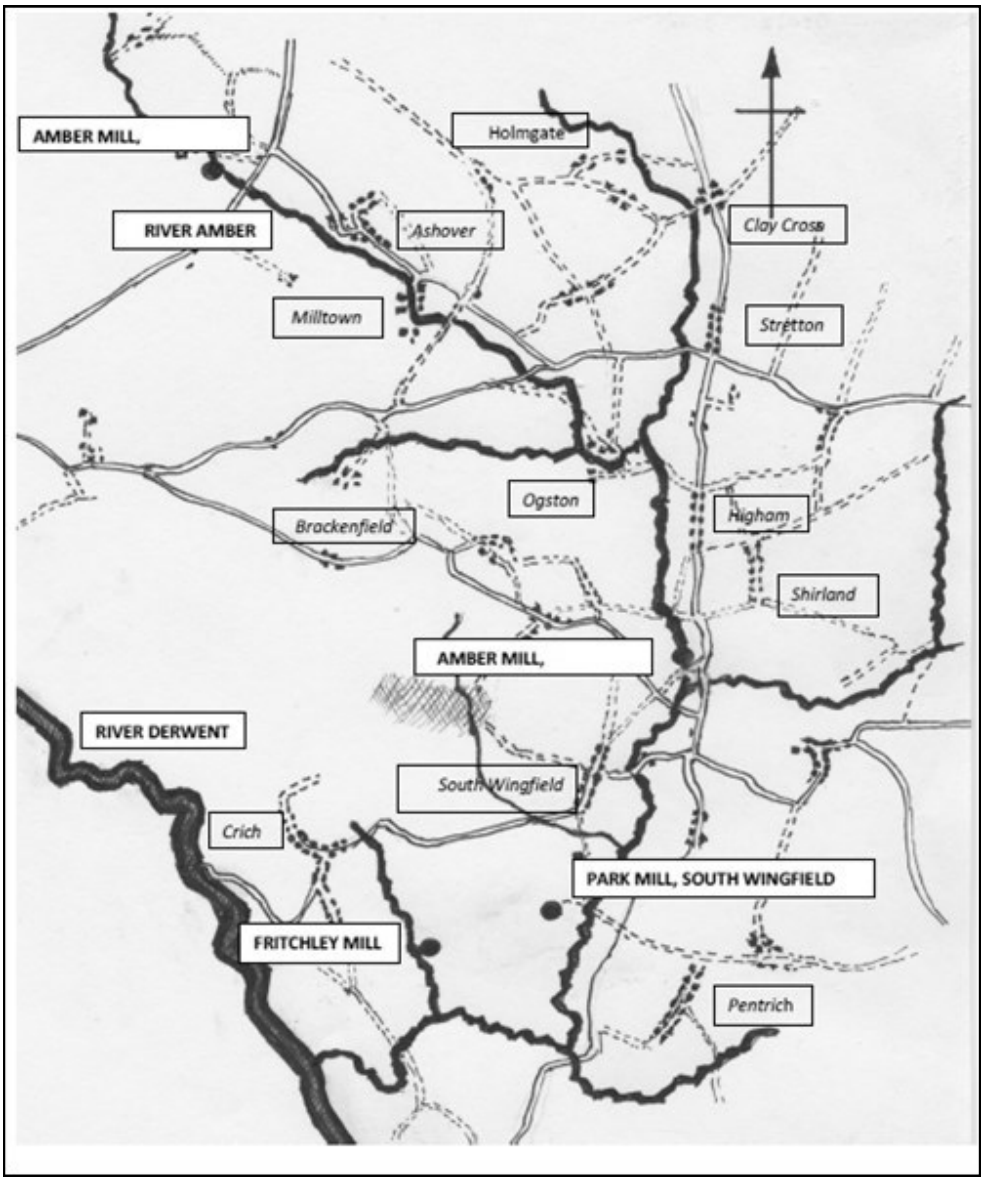


Fig.1 A sketch plan, based on Burdett's Map of Derbyshire, revised edition, 1791, showing the disposition of the four mills in the Amber Valley.

tributary of the river Derwent (see Fig. 1).

The river Amber has twin sources on the southern flank of the watershed roughly defined by the B5057 Stone Edge - Darley Dale road. After a descent of 50m from the 300m contour, the two streams are confluent within the grounds of Amber House, Kelstedge, at the site of a former lead cupola. In 1794 this location attracted the interest of a Mr. Bromby of Retford, who wished to spin coarse yarn for his sailcloth business on the river Trent. His partner, Harvey, was to be advanced £800 for establishing and equipping a four-storey the mill and allowed a fixed price per stone for spinning the raw material. In 1796 Bromby initiated lease negotiations with William Milnes, acting as agent to the landowner Sir Joseph Banks, who initially offered the customary 21 year lease at £27 p.a. Bromby, no doubt emphasising the scale of his capital outlay, sought an extended tenancy but it took a further two years before Milnes agreed to a 28 year term.

The venture was short lived and the mill, complete with dam, was available to let in 1800. The lease was taken up by George Cawood of Matlock with his associates William Lowe and John Seddon, operating as Caywood & Co. Following dissolution of the partnership in 1812 Cawood remained at the mill, spinning flax and later cotton until his retirement in the 1830s. Having purchased the mill's freehold in 1829 and become indebted, he let the mill and it operated until the late 19th century.

A site survey in 1955 revealed that the 4-storey mill building had dimensions of 100' x 21' although there remains doubt as to whether these refer to its external or internal size. Its original water power is unknown but in 1839 it was recorded as being 30hp. There was also an owner/manager's house and, in 1858, five cottages. There was no associated farm but 20 acres of land were let and there were 34 employees recorded in 1839. The Kelstedge mill development was built around a courtyard with an adjacent dam and reservoir. The proprietor's residence, Amber House, survives but over the passage of years the growth of trees has shielded it from the main Chesterfield - Matlock road. It remains, however, a fine country residence with the mill building now converted into a castellated ballroom. A reminder of Kelstedge's Amber Mill is preserved on a property located at the bottom of Slack Hill, where the river Amber crosses beneath the main road; it bears the name 'Cotton House Farm".

As early as 1789, framework knitting was a common occupation in many settlements, and to a much lesser degree, calico weaving and wool working. The first cotton mill, a four story building was built in 1792 in Wingfield Park, South Wingfield for William White, who was a maltster and local landowner of Alfreton. With external dimensions of 75' x 22' the mill had adjoining farm buildings and 7hp of both Steam and water power. White's entrepreneurial ambitions were short lived, however, since he died in 1795 and his sons, George and William, disposed of most of his Alfreton properties, including a brewery, a small weaver's shop

and a new three storey factory building designed for spinning or weaving. Significantly, they retained the Wingfield mill but in 1800 the family's South Wingfield assets were divided between the brothers. William took over the mill, assuming the role of 'cotton manufacturer' but within a year he had forfeited it to creditors, albeit relatives. Thomas Green, a grocer, draper and mercer of Alfreton, already the owner and failing operator of White's Alfreton Mill was the joint purchaser, with William Brookshaw, a cutler and hardware man, of the Wingfield Mill. The partnership was severed in 1807 when Brookshaw moved on and six years later Green found himself in financial difficulties despite having an impressive portfolio of assets, which included the mill and land at South Wingfield, houses, shops, warehouses, building land, land at Alfreton, a house and windmill at Selston, as well as 45 acres of fields with underlying coal and ironstone deposits and the possibility of enclosure. Perhaps in the forlorn hope of retaining an interest in the business, Thomas Green Junior, listed as a calico weaver in 1806, took over the Wingfield Mill from 1814 until 1816. He was followed by William Wilson, of Morley, Wilson & Morley, Nottingham hosiers. Managed initially by his sons, W. & S. Wilson, it was run by the same family for the next forty years; in 1839 it had 32 employees.

The four-storey Fritchley Mill was built in 1793 on land leased at £43 p.a. from a local freeholder, James Turton, who was involved in quarrying and lime-burning. His sons, John and Thomas, ran it as a spinning and manufacturing business and, in May 1802, acquired a newly erected three-storey mill, which had been designed for the manufacture of straw bonnets. The brothers parted company in the following year, leaving Thomas in charge. In 1805, the complex, comprising preparatory machinery, water frame and mule spindles as part of a warp room, two loom-shops, a 'Boil, Size and Dye House' and a warehouse were placed on the market but failed to attract a buyer. Thomas and his father continued in business but were declared bankrupt in 1813 and a second auction held but the machinery remained for sale in 1814. Only 4 cottages were recorded in that year when the plot had an area of only 15 acres. The number of employees was unrecorded but following the cessation of cotton working the mill was used for the manufacture of bobbins.

In 1792 George and Charles Lowe, purchased at auction, 11 acres of land at Toadhole Furnace, Shirland. Potential buyers had been enticed by not only the prospect of the river Amber running through the site for 700 yards with a fall of 14 feet and the availability of local stone, but the proximity of the Chesterfield and Matlock Turnpikes and a local unemployment problem. The subsequent acquisition of property between 1794 and 1795 increased their land holding to 21 acres, which facilitated the construction of a dam, the four-storey 'Amber Mill', farm buildings and a large house. The Lowe's intention to spin cotton and silk for Manchester's clothier's and Nottingham's hosiers was thwarted by bankruptcy in 1806. The land and mill were then purchased by Robert Spear, a Manchester cotton merchant approaching retirement, who had once had a business association with both Jeremiah Whittenbury, the Manchester cotton merchant, and Richard Arkwright, the Younger. The Amber Mill site was then part leased and sold to John Gould and Thomas Williamson, partners in Gould, Williamson & Bythesea of Derby and London. Williamson took up residence at Amber Mill where expansion was planned but, after a dispute, Gould took over the enterprise and purchased more land in both South Wingfield and Wessington.

By 1809, under the management of Joseph Hulse (1781 - 1825), Amber Mill cloths were being despatched for finishing to William Sykes of Stockport. Gould died in 1810, leaving land at Wessington and South Wingfield to his close friend Abel Walford Bellairs, a Banker with branches at Leicester, Stamford and at Derby where his residence, once occupied by a certain Dr. Darwin, also housed his business. One of his customers was Joseph Hulse, who was recruited to manage the Toadhole Furnace site, which he re-launched as the 'Amber Mill Company'. Hulse recruited apprentices from Bristol and Derby but, despite initial profitability, the Bellairs' Stamford bank failed in 1814, followed by those at Leicester and Derby. The liabilities at Stamford exceeded assets by £47,000, which included Amber Mill stock, valued at £13,000, and a £300 mortgage. Despite the Amber Mill Co. being 'a separate trade carried on by a separate fund and solvent in itself' it had borrowed £16,000 from the Derby bank, which itself was indebted to the Stamford bank. Initial attempts to sell Amber Mill, by auction or privately, in order to clear the debt failed to stimulate interest and Hulse, perhaps by lease, took over the business but by 1822 he too was declared bankrupt and he died in 1825. In October 1824, prospective purchasers were tempted by a financial incentive but £6000 on security at £4 per cent failed to attract any response and Hulse, the man designated to show viewers the site, died at Amber Mill in February 1825.

After numerous failures to find a buyer, most of the land holding, which extended to 21 acres in 1806 to 109 acres in 1814 and then reduced to 83 acres in 1822, was eventually purchased by William Eaton Mousley, the Derby Solicitor for Bellair's assignees. The mill was used for corn grinding whilst the land and house became a farm.

The Shirland Mill had external dimensions of 100' x 24'. Water and steam, around 1794, each delivered 14hp and in 1802 there were approximately 100 employees. By 1810 there were 26 cottages and the same number was recorded in 1822 when the mill had an estimated 17hp available.

IN 1839 the Kelstedge and South Wingfield mills, which remained in operation were rated as 30th and 31st of the 36 Derbyshire cotton mills. The size of the mill sites was governed by the requirement to store water. Despite the Amber, via its tributaries, providing power to numerous corn mills only two were converted to textile production. Higham was run by John Radford as a Bunk (candlewick) mill and Pentrich was adapted for silk production. The need to control water resources was a major factor in the design and development of sites. In 1805, Fritchley had an overshot water-wheel, 20 ft. high, with 8 ft. of head from a reservoir to maximise the flow of its stream but this was inadequate during dry spells. In Wingfield Park the stream was dammed to feed two reservoirs which fed a mill-race driving an 18ft. overshot water-wheel. The river at Kelstedge was dammed to create a reservoir capable of driving a 35 ft. wheel. At Shirland, lying in a shallow valley, even greater innovation was required. The builders excavated land on the west side of the river and constructed a dyke 660 yards in length on its eastern side, thereby directing the flow south to a twin sluice, which served as the river outlet. A third sluice directed the water flow to a 12ft. head, which proved adequate to power a wheel constructed from iron buckets. Despite these various attempts to harness a natural water source, there was a need for additional power and in an area close to local coal deposits it was inevitable that there was investment in a steam engine. John Mason mentions Fritchley's 7hp steam engine and South Wingfield's 'good steam engine' and, by 1839, being entirely dependent on steam raised by coal from Oakerthorpe Colliery. He raises the valid question as to why these firms with easy access to coal supplies and the Butterley Co. did not grow their businesses. He suggests that since each horsepower generated by steam consumed 12 – 15lbs of coal the reason for the reluctance to invest lay with the unreliability of the local roads. Not only was much of the local topography inimical to road transport but they were hostage to the changing seasons which could bring mud, floods and snow. Also, such small businesses lacked the clout to canvas the authorities for change. T. Blore, author of A History of ….South Winfield (sic) in Derbyshire (Brewman; London, 1793) described *'the publick roads, not turnpike, are all in summer bad, and in winter nearly impassable*. The same author, referring to South Wingfield in 1793, mentions the reluctance of framework knitters and older agricultural workers to place their children in cotton mills. This may well account for the construction of houses on some of the mill sites.

Park Mill, South Wingfield

In 1818 Hulse's employees petitioned the House of Lords against proposals to limit the working hours for children in cotton mills. In 1821 Hulse's apprentices worked from 0600 to 1930 hrs on six days per week with stoppages of 30 minutes and I hour respectively for breakfast and dinner. On one evening each week the apprentices received tuition in reading and writing. On another four evenings the youngest were taught knitting whilst the older children were assigned washing and mangling duties.

South Wingfield, despite twice failing as a producer of yarn, traded into the late 19th C as a cotton doubler, whilst Kelstedge, having started as a flax mill, survived as a manufacturer of lace thread. Fritchley, having abandoned its loom shops, continued to spin, bleach and dye cotton goods but moved inexorably to bankruptcy.

Mason closes his account with the observation that the Amber mills flourished at a time when water-spinning was at its peak during the Napoleonic wars but failed to benefit from 'those advantages natural and acquired' that worked to the advantage of the Lancashire cotton industry. There was no lack of willing entrepreneurs; the four mills between 1792 and 1840 were controlled by 23 men operating 19 differently named firms. Unlike those in Lancashire, only Spear, Gould and Hulse at Shirland and Wilson at South Wingfield had a background in textiles. Although the life of the Amber valley's firms matched that of small Manchurian firms, those that survived at Kelstedge and South Wingfield produced yarn or thread for hosiery and lace that had a market within Nottingham's textile industry. Conversely, Fritchley and Shirland produced goods for a highly competitive market in a relatively remote rural location from which road access to customers was often compromised by inclement weather. John Mason remarks that the failure of the cotton industry is unwritten but notes that of the businessmen in the Amber Valley, seven were gazetted, one transferred his assets to creditors and eleven dissolved their partnerships.

The Shirland mill had, however, the distinction of playing a role in the formative years of Hulse's nephew. In 1818, as a fifteen year old learning the trade his name appeared on the employee's petition to the House of Lords. His mother had died in 1814 and his father had previously abandoned his family to train as a minister. By 1821 he was in Manchester and he later moved to London where he rose to the top of the engineering profession. His name was Joseph Whitworth.

Bibliography

1) *King Cotton* A tribute to Douglas A. Farnie, published 2009 by Crucible Books in association with the Chetham Society.

2) The Derwent Valley Mills and their Communities published 2001 by The Derwent Valley Mills Partnership

The George Stephenson Centenary Commemorative Events in Chesterfield – Part 2

Philip Cousins

Introduction

In part one we looked at the background and organisation of the Stephenson Centenary Commemoration events in Chesterfield. In this part we look at the commemorative event's official opening and the visit of the Railway Queen, before looking at the first of the four exhibitions – that relating to engineering.

Opening the commemoration event

As might be expected there was a full opening ceremony – actually a full afternoon – which directly coincided with the day on which Stephenson had died 100 years earlier.

On Thursday 12 August a 'large crowd' gathered in front of the Chesterfield Town Hall to hear the ceremony officially opened by Lord Kennet, President of the Association of Municipal Corporations.[1] Also present was the area's MP George Benson, Violet Markham, the Mayor and Mr J. J. B. Rose of Ulverston, who was 'the oldest known living relative of George Stephenson'.[2] The crowd had been entertained by the Sheepbridge Prize Band, who later gave a concert in the Peace Gardens at Tapton House.[3] After the opening ceremony, the official party went on a 'private visit' to Holy Trinity Church. Here the Mayor laid a wreath on Stephenson's tomb, before the party visited Tapton House. After tea back at the Town Hall the four exhibitions were visited, commencing with the NCB's at the Ashgate Road Drill Hall, then the engineering exhibition at Boythorpe Road Drill Hall, thirdly to the railway exhibition, lastly to the Stephenson relics and documents exhibition at the Stephenson Memorial Hall.[4] 'Chesterfield's railway stations and public and

business premises in the town were gaily decorated with flags and bunting for the occasion, and there were many early visitors to the four attractive exhibitions'.[5] There were some complaints afterwards about the catering at the opening event for the guests,[6] but otherwise the day went with great success.

Those wanting more information about the opening day are referred to the *Derbyshire Times* of 13 August, which carried a full report on the opening ceremony and the first day. That newspaper reports that the event was also covered by another media:

> At the opening ceremony was a BBC recording van which during the morning had toured the exhibitions with Stanley Williamson as commentator. The recordings were rushed to Manchester, and an edited version was broadcast in the North Region programme between 6.45 and 7 p.m.

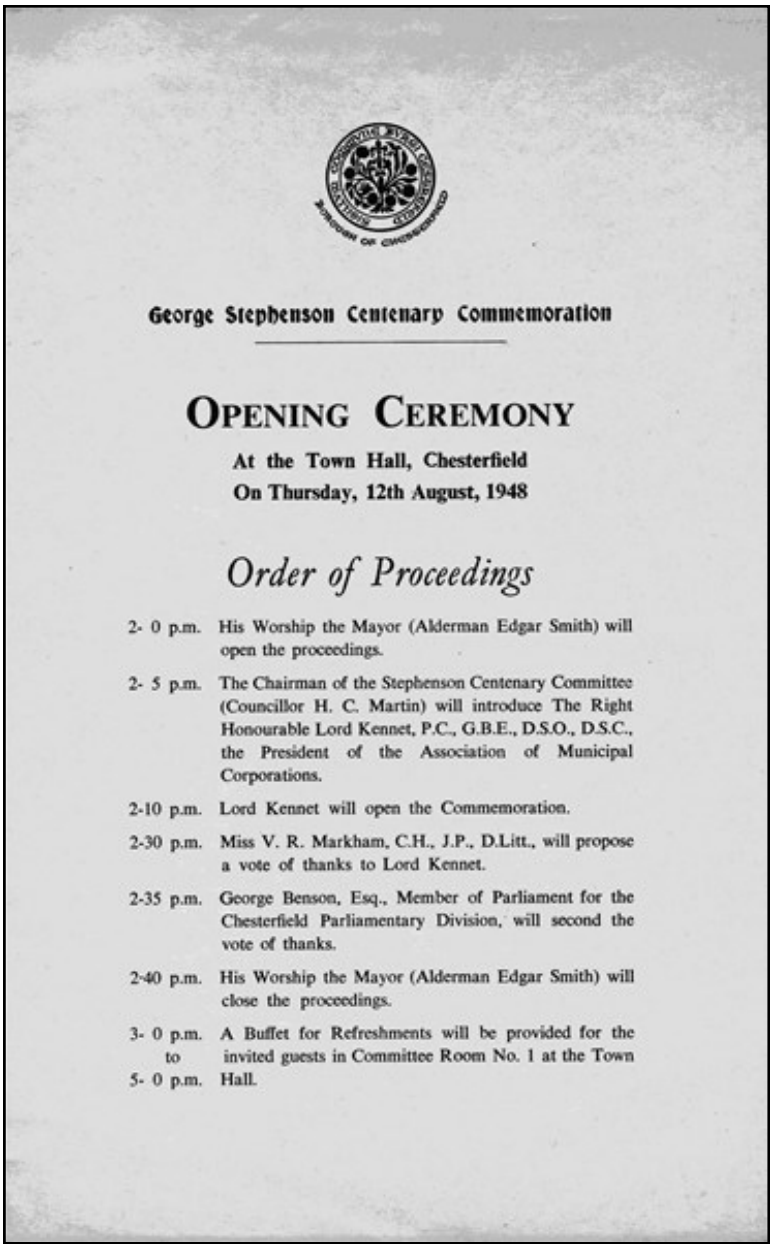
This coverage has its roots in a request made by the commemoration sub-committee some months earlier.[7]

Other commemorative events

The four exhibitions apart, other events were held during the period of the commemoration. On Sunday 15 August a special service was held at Holy Trinity Church (Stephenson's burial place), at 3 pm. Here were civic dignitaries, the religious community and many ordinary people.

The Mayor processed along with other guests (about 250 people) from the Town Hall to the Church. The church was full to its capacity of around 500, with arrangements made to broadcast the service outside to the 200 or so assembled there. The Bishop of Derby gave the address.[8]

Religious tributes continued with evensong later the same day at Chesterfield Parish Church, which saw a performance of organist and master of choristers Charles Bryars' anthem 'Let us now praise famous men'. The words had been arranged by the Archdeacon of Chesterfield the Ven. T. Dilworth-Harrison.[9] On the Friday Bryars had performed an organ recital of well-known pieces, also in the parish church.



George Stephenson Centenary Commemoration

OPENING CEREMONY

At the Town Hall, Chesterfield
On Thursday, 12th August, 1948

Order of Proceedings

2- 0 p.m.	His Worship the Mayor (Alderman Edgar Smith) will open the proceedings.
2- 5 p.m.	The Chairman of the Stephenson Centenary Committee (Councillor H. C. Martin) will introduce The Right Honourable Lord Kennet, P.C., G.B.E., D.S.O., D.S.C., the President of the Association of Municipal Corporations.
2-10 p.m.	Lord Kennet will open the Commemoration.
2-30 p.m.	Miss V. R. Markham, C.H., J.P., D.Litt., will propose a vote of thanks to Lord Kennet.
2-35 p.m.	George Benson, Esq., Member of Parliament for the Chesterfield Parliamentary Division, will second the vote of thanks.
2-40 p.m.	His Worship the Mayor (Alderman Edgar Smith) will close the proceedings.
3- 0 p.m. to 5- 0 p.m.	A Buffet for Refreshments will be provided for the invited guests in Committee Room No. 1 at the Town Hall.

The Order of Proceedings for the opening ceremony. An inside page to the brochure details the private visit that the official party made to Holy Trinity Church and Tapton House, after the opening. Following tea for the party at 4.15pm they visited each of the exhibitions, where speeches were made. According to the commemoration sub-committee minutes a single-decker Corporation bus was made available to the party to enable these visits to take place.
Collection C. Hollis/P. Cousins.

A then celebrated visitor to the event was Britain's Railway Queen, Miss Janet Taylor, from Leeds. She attended a series of events over three days organised by a joint committee of Chesterfield and district railway trades unions.[10] Miss Taylor '...stepped from her special coach on to the crimson carpeted platform at 2.40 p.m., on Friday 13 August' at Chesterfield Midland station. Here she was greeted by the station master Mr O. B. Nicholls 'and a guard of honour comprising 22 Railway Executive and railway trade union representatives.'[11] Her visit was described in a touching account by 'C.S.H.' (who was actually local National Union of Railwaymen Branch Secretary Charles S. Hollis) in the NUR's newspaper *Railway Review*, of 27 August 1948. Hollis was Honorary Secretary of the joint trades' union committee and introduced the Railway Queen at her arrival.[12] It appears this organisation had separate committee meetings, with finances separate to the council's commemoration sub-committee. The final meeting of the railwaymen's' committee

The 'Railway Queen' Miss Janet Taylor from Leeds inspects the 'This is Chesterfield: the centre of industrial England' sign as she is welcomed by railway and trades unions officials to Chesterfield Midland Station at the start of her visit on Friday 13 August 1948. The centenary celebrations looked not only back to Stephenson but also to the present and future, when Chesterfield routinely claimed to be the 'centre of industrial England'.
Collection C. Hollis/P. Cousins.

was held on 21 November 1948.[13]

The station had been newly painted and was 'festooned with flags and bunting, and platform pillars entwined in national colours.' During her stay the Railway Queen attended a civic reception, a special railwayman's commemoration meeting at which Violet Markham spoke, a special dance in her honour and appeared before 'wildly cheering children' at the Odeon Theatre, where she addressed them and 'stayed to witness with them the film of the latest railway wonder – "Diesel Locomotive 10,000" – loaned specially by British Railways.' She also attended the exhibitions – officially opening the railway one on Sunday 15 August. Later that Sunday she attended the commemorative service at Holy Trinity Church – laying a wreath on Stephenson's tomb on behalf of the Railway Executive and the Railway trades unions.[14]

The visit of the Railway Queen was highlight of the event and represented her last public appearance. The *Derbyshire Times* devotes an article to it alone.[15]

The railwaymen's commemorative meeting was presided over by Violet Markham on the Sunday at the Co-operative Hall. This attracted various railway trades union national figures along with railway and civic representatives.[16] According to a contemporary newspaper report Miss Markham was to preside over the event in a chair owned and used by George Stephenson, whilst he was engaged on building the Liverpool and Manchester railway, especially lent for the occasion by British Railways.[17] Violet Markham later reflected on the Railway Queen's 'simplicity and grace' in thanking the joint committee for their invitation to preside at the Cooperative Hall event.[18]

So this was an event for the whole of Chesterfield and beyond – children included. The commemorative brochure also makes this clear – with a contribution from the Borough's Education Officer on how schools were marking the centenary. As an example Hasland Hall School produced a pageant of George Stephenson's life and constructed a model of *The Rocket*.[19] The latter also featured in the commemoration opening ceremony.[20]

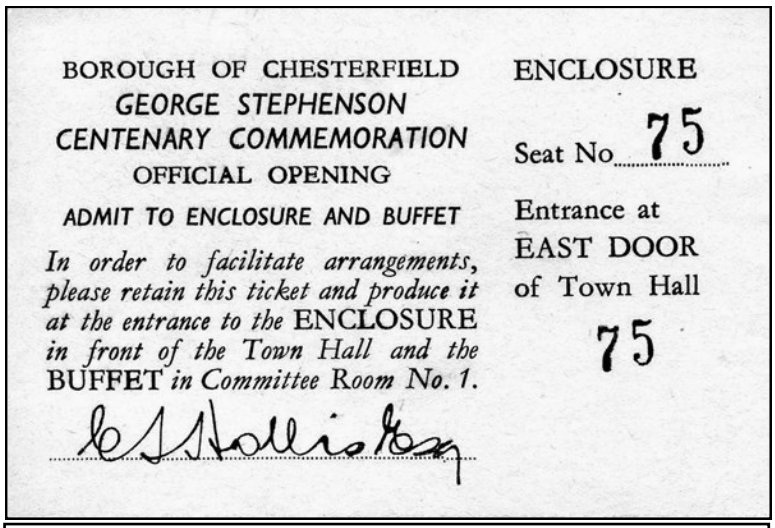
This was a time too when the railways employed thousands of people in the Chesterfield area, when coal was king along with its associated industries; when Chesterfield was the 'centre of industrial England.' The celebrations were seen as a time to celebrate not only George Stephenson, but of the contribution the Chesterfield area had and might make to the well-being of the country.

The exhibitions - Engineering

Boythorpe Road Drill Hall was given over to an 'engineering exhibition.' The list of exhibitors gives an insight into when Chesterfield styled itself the 'Centre of Industrial England'. Bryan Donkin exhibited 13 models, plus full size engineering exhibits (such as a retort house governor, centrifugal fan and pump), along with special castings and 'old and new' engineering drawings. Models also featured in the Chesterfield Tube Company's (CTC) stand. Here were locomotive, ship, tube drawing machine, power house and steel making plant models, loaned by a variety of iron and steel trades manufacturers, along with products produced by the company itself. Also at the CTC's stand British Thompson Houston were exhibiting a model of the Staythorpe Power Station, which was then under construction for the Derby and Notts. Electric Power Company.

As might be expected the Clay Cross Company were strongly represented with drawings and engines, including a single cylinder one 'made by George Stephenson', in daily use from 1841 to 1946 raising a lowering a cage at Ambergate Lime Kilns. A drawing of this engine is included in the borough's

commemorative brochure. Markham Company exhibits included models of coal handling and winding machines, whilst Plowright Brothers of 'Brampton Ironworks' continued the mining theme with displays of components, illustrations of coal preparation and handling plants and equipment. The Sheepbridge Coal and Iron Company's exhibits ranged from the old (a steam engine of c. 1825-1850) to the new (a Bristol aero engine for which the company made centrifugally cast cylinder liners). A haulage gear model was also included along with portable haulage gears and tub retarders. The Staveley Coal and Iron Company had examples of pig, iron, cast iron pipes, special castings and flexible pipe joints. Chemical, salt, lime and tar products are also listed as being on display. The Chesterfield and District Technical College had exhibits on electrical and mechanical engineering with an additional section 'dealing with some facets of engineering at the time of George Stephenson.' Finally the Chesterfield and District Model Engineering Society, then only recently formed in September 1947, were represented. The Society were able to announce that they had a permanent home in the Hartington Room at the Bradbury Hall. This was by permission of Robinsons who had also given permission for 'the sailing of model boat and aeroplane flying... at Walton Dam and the adjacent Sports Ground respectively...' The commemorative book in Chesterfield Local Studies Library contains photographs of this and the other exhibitions. From these photographs we get a glimpse of the future – Roy Smith was exhibiting the latest radio grams![21]


BOROUGH OF CHESTERFIELD
GEORGE STEPHENSON
CENTENARY COMMEMORATION
OFFICIAL OPENING
ADMIT TO ENCLOSURE AND BUFFET
In order to facilitate arrangements, please retain this ticket and produce it at the entrance to the ENCLOSURE *in front of the Town Hall and the* BUFFET *in Committee Room No. 1.*
C S Hollis Esq

ENCLOSURE
Seat No 75
Entrance at
EAST DOOR
of Town Hall
75

Charles S. Hollis's admission ticket to the Official Centenary Opening Ceremony on Thursday 12 August 1948.
Collection C. Hollis/P. Cousins.

An added attraction was a 'passenger carrying miniature railway' courtesy of the Sheffield and District Society of Model and Experimental Engineers and the Worthing and District Society of Model Engineers.[22]

This exhibition was open from 10:00am until 9:00pm in the first week, from 2:00pm until 9:00pm from 16 – 28 August, closed on Sundays. Admission was 6d adults and 3d children.[23] 17,093 visits were made.[24]

Footnotes:

1. *DT*, 13 August 1948.
2. *DT*, 6 August 1948 (advertisement of the commemoration events).
3. *DT*, 13 August 1948.
4. Borough of Chesterfield, *George Stephenson Centenary Commemoration, opening ceremony, 12 August 1948, order of proceedings*.
5. *DT*, 13 August 1948.
6. *DT*, 24 September 1948.
7. Stephenson Centenary sub-committee meeting, 4 December 1947.
8. *DT*, 13 August 1948; ST, 16 August 1948.
9. *ST*, 8 July 1948.
10. *DT*, 13 August, 1948.
11. 'George Stephenson Centenary commemoration – visit of the railway queen to Chesterfield', *Railways Review*, 27 August, 1948, on which the majority of this paragraph is based. The commemorative brochure has a page on her attendance and the events she was expected to attend.
12. *DT*, 20 August 1948. He is also pictured with her and other dignitaries at the railway exhibition.
13. Letter to C. S. Hollis from S. Knightley, Hasland Branch of the Associated Society of Locomotive Engineers and Firemen, 4 November 1948. Collection C. Hollis/P. Cousins.
14. *Railways Review*, 27 August, 1948
15. *DT*, 20 August 1948.
16. ibid and *Railways Review*, 27 August, 1948.
17. *DT*, 6 August 1948.

18. Letter Violet Markham to C. S. Hollis, 21 August 1948. Collection C. Hollis/P. Cousins.
19. *The Star*, 14 July 1948; DT, 16 July 1948 and ST, 14 July 1948.
20. *ST*, 13 August 1948.
21. CLS, Stephenson bound volume.
22. *DT*, 6 August 1948 (advertisement).
23. Ibid.
24. *DT*, 3 September 1948.

Chairman's Chat — *Cliff Lea*

Our conference this year told the tale of Chesterfield as the "Centre of Industrial England" (who was it who first coined that slogan 50 or so years ago?). But of course this area went gradually into decline as coal, pottery and our heavy industries dropped away. The 1980s and 1990s were particularly bleak.

For the last few years it's been pleasing to see that this area is now clawing its way back up. A large number of small start-ups, new business centres wherever you look, and in Chesterfield a growing retail centre, attracting coach loads from across the country. It's not gone un-noticed that the Peak District, beautiful scenery and stately homes are not far away, and the Chesterfield/ NED region is a good place from which to start. I doubt whether we'll get back to the heady days of quarter one of the 1900s, but maybe you know that in 2013 Chesterfield was one of only three towns north of Watford listed in the nations top 25 best performing towns with the least vacant shops. Unbelievable.

That of course is shopping, but this region is still a place where "things are made". Did you know that 10-14 November is "Made in Chesterfield" week? ***"Made in Chesterfield Festival"*** is a celebration of the manufacturing industry in the town. The week looks to inspire the next generation to look at this area for its industry, with businesses, schools and training providers coming together to showcase the sector. Alongside this there will be a full week of events including a manufacturing conference.

So, pop into the Museum, check on the Destination Chesterfield website, ask at the Tourist Information Centre, look around, things are happening, and some of it is good.

IA News and Notes

English Heritage – the changes

EH and the government have been planning for some time the splitting of the two major functions of this organisation.

A new charity, retaining the name English Heritage, will run the National Heritage Collection of historic properties. A newly-named non-departmental public body, Historic England, will be dedicated to offering expert advice, championing the wider historic environment and providing support for stakeholders in the heritage sector. The changes will come into effect on 1 April 2015.

The English Heritage charity will be responsible, under an operating licence from Historic England, for the care of the National Heritage Collection of buildings, castles, ruins of which we're all aware – such as Bolsover Castle and Sutton Scarsdale Hall in this immediate area. Whilst all of its properties will remain in public ownership, the new organisation says it will be able to make the most of commercial and philanthropic opportunities.

There is limited initial Government investment, but it's clear that the new English Heritage Charity will have to stand on its own two feet at the end of the day. They say that they aim to provide a better experience for visitors which will increase visitor numbers and grow membership.

I'd say, give us ten years, and let's see if it's working. Remember, its properties haven't come with an endowment to secure future running and maintenance like the National Trust, so this is wait and see time.

It's a Riot!

The subject of one of the new exhibitions at the Framework Knitters Museum at Ruddington this year is the Luddites.

Nottingham has had framework knitting activity for over 400 years; at the Museum in Ruddington you can visit the workshops and see a Framework Knitter in action, create your own souvenir on a circular knitting machine, explore the garden, the wash house and other period buildings. There is also a fine and quite extensive collection of historic hosiery including Queen Victoria's stockings; visitors can view the poor living and working conditions which gave rise to the Luddite revolt. Some members will recall a superb visit we had to the Museum the some years ago.

Until the end of November opening times are Wednesday to Saturday at 11:00am – 4:30pm, Sundays 1:30pm – 4:30pm. From 1st December, winter opening times apply, Fridays only, 10:00am –3:30pm.

Industrial heritage conferences - a question

The next East Midlands Industrial Archaeology Conference is to be titled "Transport Innovations of the Butterley Company" and it will be held in May 2015 – clearly the Butterley tunnel will take centre stage!

In a couple of year's time, maybe at NEDIAS we could offer to hold another, after our successful event of May this year. If so, what do you think could be the subject of a conference we might cover, there are so many previous industries of this area, the choice is almost endless, but please let Cliff Lea know of any that you think might work well. Your thoughts please.

Barlborough Heritage Centre

Barlborough Heritage & Resource Centre is a quiet haven of local history archives, housed in the Old School House in the grounds of Barlborough Primary School. Since opening about 10 years ago, it has gradually been gathering information, 100s of photographs and archives of this local area. They have increasing numbers of visitors and interest as the village continues to expand. It's worth a visit, opening Tuesday to Thursday 9:00am – 2:00pm, and Saturday 10:00am – 1:00pm.

More info at http://www.barlboroughrc.btck.co.uk

Ken Hawley 1927-2014—Tributes from Sir Neil Cossens and others

On the 9th October a Memorial Evening was held at Kelham Island Museum for this remarkable man who died suddenly in August at the age of 87.

Over 200 people attended, friends, associates and colleagues who had worked with him over many many years. Most had had their "arms twisted" at some point. He had great persuasive powers.

Industrial preservation and tool collecting were his passions. He recognised the importance of Wortley Top Forge and for his work there he was awarded the MBE He collected from the 1950s to the end of his life The Ken Hawley Collection Trust of over 70,000 items is the culmination of his work.

His sons Duncan and Clive introduced the evening and gave a personal tribute. The first speaker was Ken's good friend Sir Neil Cossens, former Director of the Science Museum and past Chairman of English Heritage. Perhaps the most important of the other speakers (by video) was Janet Barnes now CEO of York Museums Trust who determined the collection should be saved for Sheffield after she arranged a display of a small part at the Ruskin Gallery in 1992

Ken Hawley.
Photo by Ian Beesley. Kelham Island

Others who remembered Ken were David Vere formerly of Moore & Wright, Sheffield; Ted Young and John Cooper workers at Wortley Top Forge; Colin Barnsley of Woodware Reproductions, Sheffield; David Eaton former Director of Engineering at Sheffield University and Volunteer Curator of the Collection; Simon Barley, Volunteer Curator and John Heeley, former Managing Director of Destination Sheffield - all with good tales to tell. There was film of Ken too doing what he did best, communicating his passion and knowledge to anyone who would listen

Go to Kelham Island! See the Collection! Talk to the Curators! And Remember Ken.

Harry Fisher (9th July 1919-1st September 2014) *Derek Grindell*

Readers will recall my tribute to Harry Fisher, our oldest member, in Newsletter No.53 (Feb. 2014). This followed his announcement that due to failing health he would no longer be able to attend our meetings. On returning from holiday in the second week of September, a message on my phone, from one of his Ogston Sailing Club friends, gave me the sad news that Harry had passed away a week earlier. After a month in hospital, during which he had been fitted with a pacemaker, he was brought home but not before he had been allowed a final look at his beloved Ogston Reservoir. He fell asleep in his favourite chair and never woke up.

His funeral service was held at Holy Trinity Church, Brackenfield, on 16th September. Harry, who had lost both a wife and daughter to cancer, was adamant that he would not end his days in an old people's home and I was pleased that his life ended by his own fireside. The mourners of all ages, who came to say farewell, were a testament to the lives he had touched and the esteem in which he was held.

The Advanced Manufacturing Research Centre *Derek Grindell*

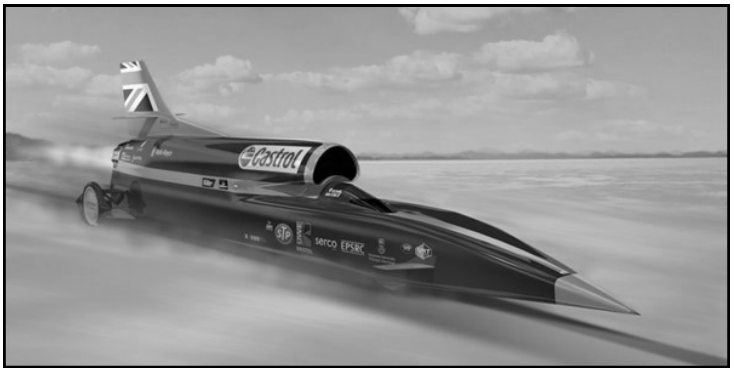
I recently joined a small group from Probus to visit the Advanced Manufacturing Research Centre, part of Sheffield University, sited on the Rotherham side of Sheffield.

It is one of a small number of University-led, industry-backed, blue sky research centres around the country. AMRC was originally conceived for the most advanced research into airframe and aero-engine machining techniques particularly to reduce construction costs, whilst taking advantage of new materials and advanced production methods. It carries out world-class research; much of the work is carried out under secure confidentiality and secrecy arrangements.

Early industrial collaborators were aerospace giants such as Boeing Corporation (which chipped in £20M), Rolls-Royce, Airbus and BAE Systems, with their funding matched by government through the Technology Strategy Board and the Regional Growth Fund. More than 80 firms were to follow including Tata Steel, Westinghouse, Sheffield Forgemasters, Dassault Systems and Lloyds Register to have key aspects of their individual projects researched and developed in a series of hi-tech workshop/laboratories.

Smaller firms can try out new and developing machining technologies, before committing to purchase and have the benefit of independent experts to solve their problems, which are invariably aimed at reducing production costs. Our visit lasted 2 hours and such is the size of the complex that we only managed to tour 2 of the 9 large buildings. Only on one occasion did we enter the ground floor of one of the lab/workshops to view a large collar, designed to enclose the fan assembly of a turbojet. It was the size of a large dustbin and it had been machined to an accuracy of less than a human hair. The actual mounting for the twin row of fan blades was fiendishly complicated with no flat surfaces, clearly a nightmare to machine and hence labour intensive. They had devised a much speedier production method and, in another area, our guide demonstrated the application of carbon fibre to aircraft landing gear. Next door, a large machine was weaving carbon fibre and then producing a large pipe. We were shown two drill bits used in machining; the metal one did the job but its output in terms of machining time was costly. Its potential replacement was ceramic and did the same job by burning the metal. It was many times more expensive than the metal drill and had a much shorter working life but the time it took to machine each part was infinitesimally less and hence it was the better and cheaper solution.

One project that may interest members was a team working on seven parts for the Bloodhound car's rear sub-frame, which holds the rocket engine in place and provides stability. In 2015 it is attempting to exceed 1000 mph and set a new land speed record in South Africa. Each part had to be cut from a solid block of aerospace -grade aluminium to precise specifications. The rear assembly includes the most complex and high-value machined part on the car, the diffuser floor, which sits beneath the rocket and will provide the downward force to keep the car on the ground as it reaches 1000 mph. The floor, comprising a complex lattice structure on one side and an aerodynamically sculptured reverse, took 192 hours to machine on the Nuclear AMRC's Hermle C60 five axis mill-turn centre.



The innovative Bloodhound

Welding engineers have already demonstrated the power of AMRC's new giant electron beam chamber by joining large cylinders in minutes rather than days. To join two carbon manganese steel pipes of 600mm diameter and 45 mm wall thickness with a weld would normally take as long as four days with conventional arc welding techniques due to the need to apply multiple layers of weld and guarantee the quality of the weld by repeated non-destructive testing. Electron beam welding can join thick metal sections with a single weld, which requires only one final inspection. The Centre's new ProBeam K2000 chamber, believed to be the largest available for research in the world, completed the cylindrical weld in 4 minutes.

Security was tight and my camera had to remain 'off' most of the time. Our guide, who had a Doctorate in Chemistry, talked non-stop and answered every question fired at him. He mentioned in passing, that Frank Whittle's original drawings for the jet engine, included ideas that had yet to be developed. He also mentioned that improvements in marine propulsion were a priority. Sheffield schools are able to send pupils but not those from Derbyshire, despite RR have a huge plant in Derby.

The really heartening aspect of this amazing development is that it has been established on the site of British Steel's Orgreave Coking Plant where, in June 1984, Arthur Scargill's NUM had 5000+ miners fighting 4000+ policemen from 10 counties, backed by 40-50 mounted police and 58 police dogs. Scargill wanted to close down the plant and ultimately bring down the government. After the oven closure the site was later cleared for redevelopment but its present use could not be more appropriate or worthwhile. For once, at least, deindustrialisation has had a happy outcome.

Interior of one of AMRC's laboratory workshops

And finally ...
.... Moving from Sutton Scarsdale Hall

Cliff Lea

Paul Halksworth gave an impressive fact-filled account of the history of Sutton Scarsdale Hall at our last meeting; I think all agreed it was a great meeting. This meeting coincided with an interesting request I'd had via Cromford Mill, about the departure of William Arkwright, the final resident when he downsized to South Membury, Devon. My request from South Membury was to provide a little more information about this branch of the family, particularly about William.

William Arkwright of course was a great grandson of Sir Richard Arkwright; by the end of the 1800s the family were scattered around the country owning enormous estates, of which Sutton Hall was simply one.

So I sent off copious details of the family's entrepreneurial spinning technology and achievements in development of the factory system. In addition I included articles on William's work with the Lancashire, Derbyshire and East Coast Railway, the local pits, and of his love of hunting dogs, particularly the Pointer, referring to his definitive book on the same subject, a book which is still the definitive work today. Paul Halksworth and Darrell Clark were most generous in allowing me to use some of their own research.

In reply, my enquirer seemed to have minimal interest in what I'd dug out, and forwarded a follow up request about some of the garden statuary, the four "Trentham Urns". When we saw Paul's slides last month, he showed photograph of the enormous 8 ft. urns on the garden terrace, which we know followed William to Devon for his new garden. The urns came from Trentham Hall, which was built by Charles Barry (of Houses of Parliament fame) for the Duke of Sutherland, and described as one of Britain's grandest houses. Now in 2014, the Trentham Hall ruins are listed by the Victorian Society in their "Top Ten Most Endangered Buildings in the Country".

The "Trentham Urns" had been purchased by the Arkwrights from Trentham Hall when the house had been mostly demolished in 1912, moved to Sutton Scarsdale, then moved to the garden of his new home in Devon. My enquirer asks whether there is any information about the removal of the urns from Sutton Hall – after all they say, these were enormous 8 ft. urns, many tons weight, the removal they say would have been a mammoth undertaking.

So, finally: how do I tell my enquirer with some patience that the uplift and removal of a few 8 ft. stone urns wouldn't have created a stir, not a ripple. This area in 1920 had, within a radius of 10 miles, dozens of coal mines, massive iron and steel production, manufacture of some of the largest and heaviest machinery made in Britain. Answers on a postcard please!

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