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AIA 2005 Derbyshire Tour Notes
Sharpe's Pottery

Thomas Sharpe, a local farmer, started his pottery in 1821, one of half a dozen pot-banks founded at that time. He used the good clay available in South Derbyshire and made domestic ware. Colour (acid), white glaze and blue (alkali) wares were made and were soon being exported. As customary, a long central workshop was flanked by a kiln at each end, for biscuit and glaze firings respectively. There was great demand for toilet bowls and sinks in the 1850s – the flushing rim pan principle still used today was patented by E Sharpe. A new works was built in the 1850s with another pair of kilns (demolished 1906). There was further development in 1901 across West Street, that site later passing to Burton Co-operative Society, who have since sold part of it, the curved facade of the car parts shop on the corner betrays a former kiln. Sharpe’s ran a maximum of six kilns at any one time. The pottery was an adjunct to Ragg’s pipe works, which made and widely exported brown sewerage and telephone conduit pipes. Exporting to Europe and further afield started in the 1860s, including the contract for the first sewerage system for Buenos Aires. The Household Closet was a major product, complete with rim-flush and numerous alternative pipe arrangements, unlike today’s standardisation. Some decoration was by transfer, some was painted.

Latterly, washbasins and all other bathroom pottery items, except baths, were sold as Chinaston Ware to 27 countries and were also supplied to Thomas Crapper Co (who still supply repro toilets and washbasins and restore old ones – at a price). The museum contains a Bombay Pan, a flush squatting-toilet for installation flat with the floor, of particularly robust construction for use in Changi Jail, Singapore. Manufacture used both slip and pressings and, after much negotiation, the Trust hopes to gain possession of the iron moulds. The clay was local and gave a yellowish colour; Albert Village, basically one street with a cross street, had an enormous clay pit at each corner of the village. Clay was also mined at a depth of 100 – 150 ft, above the coal seams, which start at 300 – 400 ft. Sharpe’s’ mixed their own cobalt, lead and other salts for colour glazes. Mocha Ware, with its coloured patterned bands on a white body, was basically a South Derbyshire invention which was later copied elsewhere.

In the 1950s the Clean Air Act prohibited continuance of coal firing. The pottery changed to top-hat electric kilns, placed by crane over racks of product. The process was semi-continuous, one rack being fired while others were loaded and unloaded. The bottle kilns were demolished but one kiln hovel survives on site because it had been converted to a warehouse by demolishing its inner kiln and bricking-in the top, despite the tapered shape admitting rain; the base of another is picked out in brickwork. Sharpe’s pottery closed in 1967 and after a major fire in 1974 the site gently decayed. In the early ‘80s part of the then-derelict site was listed as a historical monument and has been done up in the last ten years.

The Common

The Gresley family had long been landowners in Castle Gresley and Church Gresley villages a couple of miles west of Swadlincote. Gresley Common is a mile south of Sharpe’s Pottery and 1/2 mile north of Albert Village, just over the Leicestershire border.

The common stands high and is now neatly grassed. It is dominated by an artificial ski slope sculpted from the tip of a former colliery, served by the railway loop. In the 18th century the Gresleys came to realise the land’s economic worth and leased out its pasture, clay pits and coal mining to different parties, also taking rent from firms squatting on the edges, but without recognising their security of tenure.

Following extensive clay and coal working, in the 1920s the north side of Common Road was the first part of the common to be re-laid as an amenity. The adjacent sewerage pipe works is
still in business, with piles of grey clay weathering in the open air, but the large site appears not to be intensively exploited. Much the same could be said of T G Green's site next door, which contains Grade 2 listed bottle kilns and other old buildings. This very old firm, originally squatters on the common, is on the John Street extension of Pool Street and manufactures domestic pottery. This area has seen its profile dramatically reshaped by successive rounds of coal and clay extraction to the extent that the current contours bear no resemblance to those of over 2 centuries ago. At the southern edge of the area a group of potteries survive still producing sanitary ware and earthen ware including Greens characteristic blue and white striped Cornish ware. These works incorporate 5 surviving bottle kilns. The drive into Swadlincote passes the currently sadly derelict showroom of the Bretby Art Pottery.

Saturday 3rd September Visit B Belper Mills and Strutt housing

Belper North Mill
Jedidiah Strutt, who founded the mills at Belper made his initial fortune by the invention of the Derby Rib attachment, this enabled framework knitting machines to produce ribbed fabric which had more elasticity and was more suitable for the production of hosiery. He acquired a patent for the 'Derby Rib Attachment' in 1759. It was his involvement in the hosiery business which led him into yarn production as he came to realise that to make good quality hose, good quality thread was essential and he set up a silk mill in Derby.

In 1770 Richard Arkwright was looking for someone to invest in his cotton spinning venture and Strutt and Arkwright became partners. They quickly realised that a more efficient power source than horses was needed and in 1771 they bought land at Cromford to build the world's first water powered cotton spinning mill. In 1776 Strutt began buying land at Belper to build his own mills and in 1781 when the partnership with Arkwright ended he also bought land at Milford, (2 miles away) and built more mills there and created factory communities for his workers at both Belper and Milford.

In Belper his North Mill of 1803/4, originally powered by the waters of the Derwent, is one of the oldest fire proof mills surviving and replaced an earlier mill of 1786 that was destroyed by fire. It is of brick construction with cast iron columns and transverse brick arches sprung off cast iron beams, the voids in the arches being filled with hollow fired clay pots to minimise the weight. Adjacent to it is the East Mill of 1912, built to a typical Lancashire mill design, provides a startling contrast of 130 years of cotton mill development. The North Mill, a grade 1 listed building, is part of the Derwent Valley Mills World Heritage Site. Strutt originally built a complex of six mills on both sides of the road in Belper. The mills were for many years used for the production of sewing threads by English Sewing. All of the other Strutt mills were swept away when the new West Mill for synthetic yarn production was built in the 1960's. This finally closed as a hosiery production plant this year. The arch built to connect the two mill complexes on either side of the road still survives.

Adjacent on the River Derwent is the great weir complex built in 1796/7 to power the mills. Water power is still in use on this site with two turbines generating power for sale into the National Grid.

Strutt Housing
Strutt developed several areas of housing for his work force. Long Row of 1792/3 has a substantial stone built terrace on its north side which is complemented by a later brick terrace on the south side. In Short Row there is a group of three terraces probably dating from c 1790. The clusters of 1803 were built for more senior staff with four houses in each block. The other streets in this area are named William, George and Joseph Street after Jedidiah's sons. In Joseph Street there is a surviving nail maker's work shop. In the 1840's the local nail making industry employed over 600.
Morley Park Ironworks

The two blast furnaces of the former Morley Park Ironworks are substantially the earliest surviving blast furnaces in the county. Ironworking and shallow coal working had taken place on the site from the Tudor period at least but the first blast furnace on site is traditionally dated 1790, although this is unsubstantiated Hurt family testimony, Francis Hurt of Alderwasley being responsible for developing the site around that time. Because of the lack of certainty over the precise date and the lack of evidence from the early years of the operation, it is a matter of conjecture whether the first furnace was operated by a steam engine from the start or whether there was a short period of water-powered operation. This proposition looks highly unlikely nowadays, but the topography of the site has been altered radically by opencast coal mining in the relatively recent past.

The earlier of the two furnaces is the northern one, built in 1818, which is in turn a rebuild of the original c.1790 furnace. Although it ostensibly looks older, the southern furnace dates from about 1825. The works remarkably continued in operation until the 1870s given its isolated site, modest scale and technological backwardness. It is generally assumed that it had a small niche market but lack of any surviving business records makes it difficult to ascertain the precise nature of the business in later years.

Heage Windmill

The squat, coal measures sandstone building is 24' in diameter and has a stone plaque by the entrance door marked 'WSM 1850', the significance of which is not clear. The mill is built on a small mound and an entrance below could have enabled carts to back right up to the building for loading and unloading. The first indication of the mill is in an advertisement for a tradesman in The Derby Mercury of 16th June 1791,

'Heage windmill to be erected, any mason inclined to undertaken the stone building to attend at the mill, all materials laid down in place.'
(Note. We have subsequently learnt that the actual stone for the mill was quarried on the site – we found large quantities during the restoration work!)

and soon after, (20/9/1798)
'To be let - complete smock mill with fantail, two pairs of stones, good dressing machine - made to plans approved by Mr. Wass - standing in good situation at Heage'

The mill was advertised in the Derby Mercury, 1816, offering for lease in Nether Heage 'a dwelling house, a smock mill and four acres of land'. However, tower mills were commonly called smock mills in Derbyshire and note should be taken of the above request in 1791 for a mason to build the mill!

There was a small stone building alongside the mill which was used for the drying kiln, and one report suggests that a woman who entered the kiln to turn the corn was burnt to death when her clothes caught fire! However, before the restoration of the mill in 2002, the roof had fallen in and only the shell remained. The kiln has been rebuilt and is now the Visitor Centre.

In 1850 the two brothers Isaac and Joseph Shore purchased the mill, trading as millers and grocers. At this time the mill was fitted with four patent sails, with shutters rather like venetian blinds, worked by the striking rod which went through the windshaft. It operated in this form until
February 1894 when the cap and four sails were blown from the mill in a violent storm. A contemporary photograph shows a man, presumably the miller standing on the wreckage of the sails in front of the mill and the brake wheel protrudes from the top of the tower.

When the rebuild was commenced it was decided to replace the four sails with six patent sails, presumably to obtain more power, although in other respects the mill was externally similar. The work was carried out by George Chell, a millwright from nearby Fritchley, where a house in the village carries a plaque bearing his name and Trade.

The mill continued to be in regular use until 1919, operated by Joseph and Enoch Shore, the sons of Thomas and later by T.J (Tom) Shore. It in fact worked in conjunction with the nearby water and steam mills in the valley to the west of the windmill which were under the same ownership. However in 1919 the fantail was severely damaged in a gale, most of the blades being lost. The damage was serious and presumably in line with the economic situation of mills at that time, the mill closed down.

It became almost derelict, drawings and photographs in the 1930's showing it with the sail bars hanging down in a totally neglected manner. A report in the Derby Evening Telegraph in 1934 reports that the mill was up for sale by auction and includes a contemporary photograph showing that the fantail was missing and that the sails were not complete. Care was needed it was said when entering the mill because some of the floors were rotten. The view, taken from the nearby road, shows the adjacent Windmill Cottage and mill standing in an area completely devoid of the trees and vegetation which presently surround the site. Karl Wood painted the mill in 1932, standing without the fantail and with the derelict kiln alongside.

It was struck by lightning in 1961 and a photograph in 1967 shows only the remnants of the sails and a stub where the fantail and its staging had been. A preservation order was placed upon the mill by Derbyshire County Council in 1966 and they later became the owners.

Over the next few years restoration work was carried out by the millwrights Thompsons, of Alford in Lincolnshire and new floors, sails, cap and fantail were made. The new sails were hoisted on the 15th March 1972 and the fantail was lifted into place three days later. The mill remains in the ownership of Derbyshire CC and is listed Grade 2*. She was again struck by lightning in 1995 and a sail and internal machinery was damaged, fortunately without causing a fire. Repairs were carried out but this event led to the formation soon after, of the ‘Heage Windmill Society’, closely followed by the formation of the support group ‘The Friends of Heage Windmill’.

In conjunction with owners, Derbyshire County Council, a plan for the complete restoration of the windmill, back to working order was developed, the total cost of which was around £400K. Applications were made for grants to various bodies, including The Heritage Lottery Fund, WREN and English Heritage, coupled with contributions from local councils, fund raising and sponsorship, all leading to the work commencing in July 2001. A new access road was constructed and sufficient work was completed for the mill to be formally opened to the public in June 2002. Grain was again milled in 2004, after a lapse of more than 80 years.
Sunday 4th September    Visit D   Derby Railways

The tour includes a walkabout in the Midland Station area and a tour by bus to see railway features elsewhere in the city.

1. Midland Station and Locomotive Works

Derby became a railway centre in 1840 when the Midland Counties Railway (from Rugby, Leicester & Nottingham), North Midland Railway (from Leeds) and Derby and Birmingham Junction Railway met at a "tri-junct" station built by the NMR. The MCR and NMR made Derby their headquarters and constructed workshop facilities to the west of the station. The NMR also built a railway village (including houses, shops and a pub) for its staff, and a private entrepreneur established one of the first railway hotels. In 1845 the three railways amalgamated to form the Midland Railway which became one of the largest in the UK, with lines to London, Bristol, Manchester and Carlisle, and even a subsidiary in Northern Ireland. Derby remained its headquarters right up until the grouping of 1923. The station itself and the area in front of it saw several expansions to accommodate traffic and provide office facilities, and the original workshops expanded to become Derby Locomotive Works. The works was progressively closed in the 1990s and the area has been redeveloped as "Pride Park". The train shed was damaged by bombing in 1941 and replaced by concrete platform awnings in 1954, and most of the original station building was demolished in 1985.

The listed 1840 workshop buildings are:
- NMR engine shed – a polygonal building with a central turntable and radial tracks for locomotives. The first example of a distinctive style of railway buildings which was copied all over the world.
- NMR carriage workshops – an unusual galleried building
- NMR offices and clock tower (with later upper floors)
- MCR workshops
A new use for these is still awaited.

Other features we shall see are:
- later Locomotive Works buildings, now disused and for sale
- route of Derby canal under the NMR at north end of station
- MR loco-men's lodging house (1872)
- NMR railway village of 1842 including houses, shops and pub
- MR Institute (1892)
- Midland Hotel (1841)
- Remains of original tri-junc station (1840)
- Nelson Street offices (1872)

2. Great Northern Railway in Derby

The second railway to arrive in Derby was the Great Northern Railway's Derbyshire extension, opened in 1878. The route crossed Friargate, the most elegant Georgian street in the town, and to mitigate the visual impact an ornate cast iron bridge was provided, which was somewhat of a show-piece for the Derby foundry of Andrew Handyside & Co. The same company provided an unusual bowstring wrought iron arch over the River Derwent, which survives as a footpath.

The GNR station site has remained derelict since closure in the 1960s. The main surviving feature is a very large brick warehouse which has been allowed to degrade into an appalling condition despite being Grade II listed. The associated hydraulic engine house is in better
condition. There have been numerous plans for re-development of the site but none have yet come to fruition.

3. Later developments along London Road

By 1870 the Midland Railway had run out of room for expansion on the Locomotive Works site, and further developments took place around the London Road to the south of the town centre, and most of these remain in railway use today.

The Carriage and Wagon works on Litchurch Lane, built between 1874 and 1878, now belongs to Bombardier Transportation, and with the closure of the Alstom (formerly Metro-Cammell) works in Birmingham, it is now the only large scale railway rolling stock manufacturing works in the UK.

The LMS scientific research building (1935) and the Railway Technical Centre (1965-1972) were established to support the modernisation of railway technology in the mid-20th century. This was where British Rail Research developed the technology for tilting trains, magnetic levitation and computerised railway signaling. The buildings now house a myriad of engineering and consultancy companies resulting from the privatisation of British Rail in the 1990s.

Further down the London Road, the LMS School of Transport (1938) is an attractive neo-Georgian building. Inside there is an original mural in the dining room, and a sunken lounge which originally housed a model railway used for training signaling staff.

Sunday 4th September  Visit E  Long Eaton & Shardlow

1. Long Eaton Lace Factories

The manufacture of lace is integral to the history of Long Eaton, along with the railway industry it made the town prosperous. The town's growth as a result of this is shown in the census returns between 1850 and 1900, the population increasing from 1,000 to 13,000 between these dates.

Beside the Erewash Canal, where it passes under Derby Road, stands a group of tenement factories of the late 19th and early 20th centuries. These buildings are the dominant features of the Long Eaton Mills Conservation Area. An imposing physical relic of the lace industry, at its peak it employed half of Long Eaton's working population. The four large, four-storey mills, West End Mill (1882), Whiteley's Factory (1883), Harrington Mill (1885) and Bridge Mills (1902) are typical of the form of factory that was built for the lace industry. The buildings were designed to provide rented space for a number of separate firms; the lace trade being traditionally one of relatively small concerns. The system of tenement factories enabled many people to set up as lace manufacturers with the minimum of capital, sharing the cost of power and other overheads.

The factories are functional in design with closely spaced cast-iron windows to provide light for the lace makers, and projecting brick turret staircases to leave each floor entirely clear for the long lace machines. The turrets of turnpike staircases are the only embellishments. Although the factories have gradually lost their lace-manufacturing tenants, they continue in their original role of providing rented space for industry.

On the opposite side of the canal on Milner Road is a later row of lace factories: Victoria, Alexandra and Edward Mills (1906-1909). These are of the 20th century single storey layout with north-light roofs, and they stand next to their power source, the Long Eaton Urban District Council electricity generating station of 1903.
2. Midland Railway Sheet Stores

Sheet Stores Basin is located to the east of the Erewash Canal about half a mile from Trent Lock, where the canal is crossed by the main Derby to London railway line. The basin was constructed in 1840 when the Midland Counties Railway had just opened its first route from Nottingham to Derby. The railway bought the coke they used as locomotive fuel from the Erewash Valley coalfield, and so they built a canal basin where coke could be transferred from canal boats to railway wagons. There was a house for the manager, and a stone built coke store equipped with hoisting apparatus to lift the coke from the canal to the railway sidings at a higher level. As well as bringing in coke for their own use, the railway company also hoped to attract coal traffic from the Erewash coalfield to London. They negotiated a deal with the Canal Company, that coal for London transshipped onto the railway at the basin would attract the same discount on Erewash Canal tolls as coal carried all the way by canal.

By the late 1840s, the railways were being extended into the coalfield and the need to transship fuel from the canal declined. From 1854, the site found a new use as the Midland Railway's Sheet Stores. The "sheets" were tarpaulins to protect freight carried in open railway wagons, and the Sheet Stores was where they were manufactured and repaired. The original coke store building alongside the canal was converted, and during the course of the 19th century a series of increasingly large buildings were erected in distinctive Midland Railway red brick styles.

At its peak around 1900, over 200 people worked at the Sheet Stores and there was an 18 inch gauge internal tramway to move materials between the buildings. As well as making and repairing wagon sheets, workers at the site repaired grain sacks and ropes. The work is illustrated in an excellent set of photographs taken by the LMS railway's official photographer for an article in the staff magazine in 1925; these are now held in photographic collection of the National Railway Museum at York. The photographs show demarcation between the sexes; both worked at sewing machines, but the men were stitching tarpaulins whilst the women worked on grain sacks.

By the 1960s, the traditional railway goods train with open wagons sheeted over by tarpaulins had become a thing of the past, and the Sheet Stores was sold for redevelopment as an industrial estate. The original buildings have been converted and rented out. The only major loss has been the building built for repair of grain sacks, most of which was destroyed by a fire in 1992, and replaced by a modern industrial unit. The buildings contain a typical mix of Long Eaton industries, from furniture and textiles to engineering and printing. They have survived the change of use remarkably well, and several retain their distinctive Midland Railway cast-iron window frames. The canal basin is now used by the Wyvern Marina and Long Eaton Boat Club.

3. Shardlow Canal Port

Shardlow is an 18th century canal port on the Trent & Mersey Canal about a mile above its junction with the River Trent, where the canal crosses the A6 Derby to London road. Goods were transferred from wide boats to narrow boats and stored during this operation or while awaiting redistribution by road, in a growing range of warehouses. Along with this development came all sorts of other businesses and buildings to support the carriers, boat builders, rope walks, workshops, stores, stables, offices, workers' cottages and owners' houses. The decline of the canal business brought different uses for the warehouses but the area remains remarkably unchanged.

Shardlow Heritage Centre is located in one of the earliest warehouses, known as the Salt Warehouse which refers to the storage of salt from Cheshire at the opposite end of the Trent & Mersey Canal. Our visit will include a look at the displays in the Heritage Centre, and a short walk along the towpath to see some of the other warehouses and wharfs.
Sunday 4\textsuperscript{th} September  \hspace{1cm} Visit F  \hspace{1cm} Darley Abbey and Derby Mills

\textbf{Darley Abbey}

By the mid 1770s Thomas Evans had acquired paper, corn, flint and other mills operating on the west bank of the Derwent at Darley Abbey. Arkwright was a customer of Evans' Derby Bank and Evans was reputedly encouraged by Arkwright to embark on cotton manufacture.

The complex of cotton spinning mills was founded at Darley Abbey by Walter Evans in 1783. This first mill burnt down in 1788. The earliest surviving mill on the site is now the Long Mill which was rebuilt after the fire. Long Mill is of 5 storeys plus an attic and originally had clear span timber beams, later reinforced by the insertion of cats iron columns. The building was extended in 1798 and 1801 with the building of the Middle Mill, East Mill and West Mill. The extensions have progressively more complex fire proof building systems, commencing with sheathed timber and culminating in iron beams with brick arches. The mills were powered by the waters of the Derwent. By 1821 there were four wheels providing around 100 horse power, this situation was unchanged until 1896 when a steam engine was installed and some of the wheels replaced by turbines. Evans subsequently specialised in sewing threads in common with most of the other Derwent Valley Mills, the brand of Boars Head Thread becoming well known. The mills ceased thread production around 1970 as part of the J & P Coats thread empire. The mills are now part of the Derwent Valley Mills World Heritage Site. The adjacent areas to the mill contain several other associated mills and buildings including the North Mill of c1825, the bobbin shop of about 1840, the saw mill, timber drying sheds, preparation buildings and the fire station.

Across the River Derwent the Evan's built workers housing, a church and a school. The development of the village has a haphazard nature when compared to many planned settlements. The earliest housing is in Flat Square and dates from 1792. Building by the Evans continued until the 1870's.

\textbf{Derby Mills}

Rykneild Mills Bridge Street, is an impressive complex of three, five and seven storey mills. They were originally established by Thomas Bridgett as throwing and doubling mills in the early 19\textsuperscript{th} century. The constructional details of the mills vary. The 7 storey North Mill was built between c1810-12. The five storey middle mill was added in 1842-5 which, like the North Mill was of traditional timber internal construction. The seven storey South Mill of 1838, built for ribbon manufacture, is of fire proof construction with cast iron columns and cross beams carrying brick arched vaults. The fourth mill on the site, the warping mill dates from the 1840's and is also of fire proof construction. The mills remained in use for the manufacture of narrow fabrics and tapes until 1999. It is now in the course of conversion into residential units. This area of Derby contained many mills, most were originally built for silk spinning and any were later converted to narrow fabrics and other textile uses. The last 20 years has seen a huge rate of loss of these structures.
Monday 5th September Visit G Peak District Lead Mining

This tour has been organised and led by Lynn Willies and John Barnatt of the Peak District Mines Historical Society. The society was founded in 1959 to promote the recording and conservation of the mining heritage of the Peak District. The society operates a museum in Matlock Bath and a Field Centre at Magpie Mine near Sheldon, as well as organising lectures, surface and underground meets, and the unique Derbyshire tradition of the Barmote Court. The society's bulletin "Mining History" is one of the leading journals on the topic and circulates throughout the world.

Peak District Mining Museum

The Museum was set up 28 years ago by members of Peak District Mines Historical Society, and the associated Temple Mine was opened five years later. The building was originally the Kursall., a facility for visitors, c.1910. It was immediately embroiled in a mining dispute – one legal effect is that both the Museum and the Mine are nowadays exempt from the lead mining laws which oppress everyone else, did they but know it!
Development of the Museum is still on-going under project leader Robin Hall, but there is now more than can be absorbed in a single visit. Popular features result from a deliberate hands-on policy (rare when set up) which includes the climbing shafts. Aspects covered include law, geology, technology, lead uses and many others and lead and copper smelting is under development. The Wills Founder water pressure engine, of a type designed by Trevithick was made at Coalbrookdale in 1819. The bookshop has a wide choice of books and the PDMHS journal, Mining History.

Temple Mine is largely a 20th century fluor spar mine, though with older sections. It displays the mineralogy and geology particularly well, and is set out as a small 1950s mine, its last period of use. There is a battery electric loco of 1934, possibly the oldest such available. The fool's gold panning activity outside is hugely popular.

Matlock Bath

Lunch is not pre-arranged today, but Matlock Bath has no shortage of cafes, pubs and fish & chip shops. The tourist industry developed to exploit the mineral waters and the dramatic gorge through which the River Derwent passes. The railway station is in a timbered "Swiss Cottage" style, and in the autumn illuminations along the riverside paths provide an inland rival to Blackpool. A late 20th Century phenomenon is the gathering of large number of motorbike enthusiasts at weekends and bank holidays, and a cable-car now provides access to the "Heights of Abraham" show-caves. In the midst of this is the High Tor Works, a former water power white lead grinding site which is the last surviving Derbyshire pigment manufacturer, now operated by Redwood Pigments.

Magpie Mine

Magpie is probably the best lead mining site nationally (say English Heritage, prompted by the writer). It has features dating from the 17th century and probably earlier, but the main stone buildings and their chimneys are 19th century, including two engine houses. The headstocks and corrugated steel winder-house, with winder inside, date from the last use of the mine in the 1950s. Also on site are a powder house and a re-constructed horse gin and the agent’s cottage and smithy, the latter two now the PDMHS field centre. Magpie and the adjacent Redsoil mines were the scene, in 1833 of disputes which led to the deaths of three Redsoil miners underground, part of a particularly fascinating history.
High Rake Mine

Excavations are currently underway next to a well-used footpath, on land owned by the National Park Authority, at High Rake Mine near Great Hucklow. Here a large 19th century mine complex, rivalling Magpie Mine in size, had been largely demolished in the 1920s to provide stone for council houses. The site was later partially re-worked for fluorspar and then used as a council tip. Before the project began little was visible. A large concrete cap over the deep engine shaft was obvious, while an ore-crushing stone and a few other large blocks of gritstone peeped through the rank vegetation; overgrown hollows marked the sites of some of the buildings. To date, the lower walls of two Cornish engine houses with boiler houses and chimneys, a cobbled coal yard, an ore-crushing circle and a gin circle have been revealed by excavation. When archaeological excavation and consolidation are complete, on-site interpretation will be provided as this site now provides a valuable opportunity to raise public awareness and appreciation of the lead mining resource.

Monday 5th September  Visit H Caudwells Mill & Hope Cement Works

Caudwell’s Mill

On the South East edge of the Peak Park in Derbyshire is Rowsley, on the A6 between Matlock and Bakewell, a typical Peak District village with farms and industry interspersed among the houses. There has been a water mill in the village, at least since 1300. The mill was, and is still, owned by the Duke of Rutland, who has an estate locally at Haddon Hall. John Caudwell in 1874 leased the site, where formerly had stood the remains of a saw mill and a corn mill, and built a 4 storey mill.

John Caudwell came from a Derbyshire family, who had been involved in the flour trade since 1836, with mills at Southwell, Wingerworth, Pye Bridge, Bolsover, Huthwaite and Mansfield. John was a partner in some of these with his cousins, Francis and Theodore, but left the partnership and leased Amber Mill near Alfreton in 1860. He ran this successfully until 1874 when he leased the site at Rowsley from the Duke of Rutland’s estate. The clearance of the site and the construction of the mill in Derbyshire gritstone was completed at a total cost of £7,000, a sign of John’s confidence in the business. He equipped the mill with two water wheels, one to power the flour mill and the second for the provender mill. There were 8 pairs of millstones on the first floor, supported on cast iron columns, for the flour mill and three pairs for the provender mill. Some of the columns remain in the mill supporting the floor. Two worn-out millstones, one Peak District gritstone and one French Burr have been found buried in the mill yard and are now on display. Following the introduction of roller milling into England in the 1880s, by 1884 John Caudwell was sufficiently impressed by this new technology to rip out his almost new mill stones and have Thornton’s of Retford replace them by the, then modern, roller technology. This is believed to have cost a further £2700. The use of waterwheels to drive the roller mills was not very successful since rollers required a higher speed (typically 300 r.p.m. instead of 100 r.p.m.), and as a result a 35 H.P. ‘Trent’ turbine was fitted in 1887 for the flour mill. Caudwell & Co. wrote to C. L. Hett of Brigg who supplied the turbine saying “we have turbine at work and shall be pleased to give you a testimonial as we cannot speak too highly of it.” The waterwheel remained driving the provender mill until 1898, when a “Little Giant” turbine of 50 H.P. was installed, supplied by S. Howes of London. This turbine still is used today, driving a 12 kW electric generator for the mill lighting.

Through the years the machinery was improved and modernised. Briddon & Fowler from Manchester installed new rolls and other plant over a two year period starting in 1905 when 8 pairs were installed. A further 10 pairs were fitted by the end of the two years, these having the new ‘Alphega’ system of separation after the rolls. Most of these rolls are still in use in the mill today. Flowcharts and layouts of this date are in the Derbyshire Record Office.

In 1914, the German firm of Amme, Giesecke & Konegen installed a new roller mill, four ‘Ageka’ plansifters, a purifier, a dust collector, ten detectors and a 76 H.P. turbine, to replace the ‘Trent’ at a total cost of £1500. The German workforce, who were working at the mill in 1914 at the
outbreak of the First World War, completed the work, and were then interned on the Isle of Man, returning to Germany around 1920. Since the 1914 remodeling, minor changes have been made, mainly by Henry Simon Ltd, but the main operation of the mill was as left in 1914. This, in turn, was the 1905/7 modernization of Briddon & Fowler.

The complete plant has 22 pairs of rolls in 12 frames, 4 plansifters with 18 separate sets of 12 sieves, 2 double purifiers (there were 4 originally) and 21 elevators. Unfortunately some of the wheat cleaning plant has been removed. The mill is classed as a 5 sack mill; producing about 5 tons in an 8 hour shift.

Following John Caudwell (1827-1891), Edward (1866-1941) ran the mill from 1887, followed by his son Edward (1900-1990). The third Edward took over the mill from his father in 1964, running it until the family gave up the business in 1978. In 1980, Caudwell's Mill Trust Ltd, a charitable trust, was formed and leased the mill and site from Haddon Estate. Following considerable discussion, it was decided to mill only wholemeal flour and Henry Simon Ltd were asked to advise on the modifications; in December 1981 milling recommenced again. Unfortunately in 1998 a number of bearings in the rolls overheated, partly because of choked oilways in the frame castings, and after replacing them it proved difficult to produce flour of a quality suitable for commercial bakers. As a result the mill still runs for visitors to see the machines in operation - especially the plansifters - but does not make flour.

The Trust is formed of a number of interested people and representatives of various local & national organisations, including the Society for the Protection of Ancient Buildings. In the time since the Trust was formed, they have raised money to repay all the loans needed in the initial years and completely re-roofed the mill. In addition a considerable amount of cleaning, painting and some required alterations have been undertaken. Once again, Caudwell's Mill operates in the community as it has for over a century, employing 5 to 8 people in the Mill and perhaps another 15-20 on the site in the various shops, craft workshops and the cafe. With education in mind, a teacher's pack was produced covering technology & history of the mill and a range of educational visits are offered. Derbyshire's unique Victorian water powered roller mill now runs seven days a week (with the exception of the Christmas period) for visitors to see the process. A range of specialist flours are available packaged in 1½, 3, 6, and 16 kg sizes. Tours and talks can be arranged by calling the miller on 01629 734 374.

**Hope Cement Works.**

G&T Earle selected Hope as the location for a cement works in the 1929 as it is ideally placed for cement manufacture, located alongside the 1892 Sheffield to Manchester line of the Midland Railway and lying between extensive deposits of limestone and shale, the two main raw materials used in making cement. Earle's a Hull based company where a major player in the UK cement industry. They became part of Blue Circle Cement which was acquired by Lafarge.

When it was first developed, Hope Works used the wet cement-making process; the factory ultimately had five kilns making cement this way. The factory was rebuilt in the 1960s to use the more efficient 'dry' manufacturing process, with only two kilns. Construction of the new facility began in August 1968 and the first kiln came into operation in April 1970, the second kiln a month later. Although substantial investments have been made in developing the Works since then, the appearance of the factory today, with the landmark preheater tower and twin outdoor kilns resulted from the late 1960s redevelopment scheme. The works produces around 1.3 million tonnes of cement a year, around 10% of the total UK output.

The limestone and shale are both quarried adjacent to the Works. The limestone is quarried by blasting the rock loose with explosives. Each blast loosens some 20,000 tonnes of stone, enough to supply the Works for around four days. The limestone is loaded by large mechanical diggers into dump trucks and taken to the rock crushing system. The crusher is the first of three which fragment the stone, reducing it to around 20 millimetres in size. The stone is taken from the quarry by a series of conveyor belts to the raw materials store at the Works, over a kilometre away. The shale, a softer rock, is excavated without blasting, using mechanical diggers.
It is also crushed before being taken by conveyor to the raw materials store. To achieve the chemical balance needed in cement, the two rocks are used in ratios of approximately 82 per cent limestone to 18 per cent shale. The ratio of limestone and shale is regularly adjusted to ensure consistent product quality. The first stage in processing the raw materials is to grind them in raw mills to a fine powder, called raw meal. The mills revolve at high speed and steel balls inside them pulverise the stone into raw meal. From the mill, the raw meal is analysed before being pumped to blending silos.

Two 70-metre long kilns are the heart of Hope's cement-making process. Before entering them, the raw meal passes down the preheater tower. As it descends, the powder is heated by hot kiln exhaust gases which rise up the tower through a series of cyclones. Chipped used tyres are fed into the process at the base of the preheater tower to further heat the raw material just before it enters the kiln. The kiln is heated by a flame fuelled with pulverised coal and petroleum coke. As it slowly rotates, the raw meal moves down the kiln to reach the "burning zone", where it is heated at up to 1,450°C. At this temperature, the meal is converted into nodules of clinker, containing hydraulic calcium silicates. The clinker passes over cooling grates to reduce the temperature to 100°C and is then stored.

The final stage in the process is to grind the clinker with a small amount of gypsum in a cement mill. This creates a fine powder - cement. The finished cement is stored in silos, before being either packed in bags or loaded into bulk road and rail tankers for distribution.

**Monday 5th September – Evening visit to the National Tramway Museum**

It was in 1955 that a small group of tramway enthusiasts gathered at Blackpool's Marton Tram Depot to witness the ceremonial handover of Southampton 45, the first tram to be saved by private enthusiasts, to the founders of the Tramway Museum Society. Fifty years to the day later, there was a re-enactment of the handover in a location which would have surprised those pioneers; a world leading museum of urban transport high on a rural Derbyshire hillside.

This came about because in 1959, volunteers from the Talyllyn Railway were lifting rails from the disused narrow gauge mineral railway which linked Cliffe Quarry at Crich to the Clay Cross Company's lime kilns at Ambergate. They alerted the Tramway Museum Society to the existence of a site with workshop facilities, a route along which a tramway could be constructed, and space for expansion. The first public rides in a horse tram began in 1963 and electric tram operation started the year after. Since then the site has been transformed with covered accommodation for a fleet of over 50 trams and support vehicles, a cobbled street with re-erected buildings, and extensive purpose built exhibition, workshop, library and archive facilities.

Our visit to the site will include:

- tram ride
- tour of workshops and car sheds
- visit to exhibition; a re-creation of a 1900s trade fair for tramway equipment
- visit to library and archives
- three course evening meal in restored pub
Tuesday 6th September    Visit J    Cromford & Matlock

Our host for today is the Arkwright Society, which grew out of the Arkwright Festival of 1971, commemorating the two hundredth anniversary of Richard Arkwright’s arrival in Cromford and the construction of the world’s first successful water powered cotton spinning mill in 1771. From the beginning, the Society has been engaged in the practical conservation of industrial monuments (notably in Lumsdale, Ashford, Cromford and Slinter Wood), in publishing and in educational activities. The programme will be:

10am           Arrival at Cromford Mill and coffee.
10.20am         Introductory talk by Dr Christopher Charlton
                 Bringing The Mills Back To Use – The Cromford Strategy
11.30am         Dr Pat Strange, Archaeologist and Dr Christopher Charlton
                 Tour of the site including the First Mill to inspect the excavations
12.30pm         Lunch
1.30pm          Richard Eastwood, Eastwood and Partners
                 Conservation Philosophy in Action
                 The Issues and Solutions in Repairing and Reinstating the Grade I Listed Cast Iron Aqueduct
2.15pm          Choice of two tours
                 Masson Mill (on foot or by coach)
                 Lumsdale Valley (by coach – some walking on arrival)

Cromford Mill

In August 1771 Richard Arkwright began building in Cromford. He created the world’s first successful water powered cotton spinning mill; a vital step towards full scale factory production. The mills at Cromford with their powered machinery, large workforce and factory village became models for others throughout Britain and abroad. For the Victorians who learnt so much from his example, Arkwright earned the accolade ‘Father of the factory system’. Richard Arkwright’s achievements are acknowledged throughout the world. In Germany, at Cromford (just outside Dusseldorf) and in the United States, at Pawtucket in New England, the first mills using Arkwright’s technology have been restored and preserved as museums. In this country, where the story began, the same process is underway.

In 1979 the Arkwright Society purchased the Cromford Mill site and began the difficult task of restoring the grade I listed buildings of this internationally important monument. The society employs its own building team and has its own conservation joinery workshop. The team includes trainees and young people gaining work experience. The site now has a restaurant, shops, meeting rooms and an exhibition. It is open every day except Christmas Day.

Stabilisation of Sir Richard Arkwright’s First Mill is now well underway. The North End of the buildings, an area that has for many years been too dangerous to work, has now been stabilized as part of a £312,000.00 contract with C R Cane, specialist restoration contractor. This is the last major item of work funded by the Heritage Lottery Fund in the first phase of its contribution to the restoration of the Cromford Mills. Works carried out include the removal of part of the roof and the reinforced concrete second floor which was inserted after the fire of 1929. Part of the west face of the First Mill has been consolidated and a section of the East elevation and 50% of the North Gable have been dismantled, stone by stone and now await reconstruction, as many stones as possible being returned to their original places in the structure. A steel frame will be inserted and the wall will then be rebuilt.
Masson Mill

Masson Mill, built in 1783, proclaims Arkwright’s growing wealth and self confidence. Unlike the original Cromford Mill where the power source is the Bonsall Brough and a lead mine drainage sough, Masson Mill is built on the river Derwent, which offered Arkwright the opportunity of a power source ten times greater. Externally, its design reflects a deliberate movement towards conscious architectural style, and its overall layout, incorporating the staircase and ancillary services in a central projection leaving production floors uncluttered, was an important advance on the early ‘Cromford’ style mills. The mill was powered by a single waterwheel which, by 1801, had been replaced by two, a system which continued (with replacement wheels by Wren and Bennet in 1847) until turbines were installed in 1928.

Buildings were added to the north and west of the mill by c.1835, some of which were subsequently demolished. In 1911, 1928, and more recently in 1998, extensions were added in Accrington brick. The mill chimney dates from 1900, and this and the engine house were the work of Stott and Sons, the famous mill architects. The mill has been extensively repaired and restored recently. The mill is now home to a museum and a retail village, with some of the 20th Century extensions converted to a car park.

Lumsdale

The Lumsdale Valley is one of the best examples of a water-powered industrial archaeological site in Great Britain. It is unusual to see such extensive use of water power in such a relatively small area. Since at least the 16th century, the Bentley brook has provided the power for a series of mills in the valley, some of which continued in industrial use until the 1930s. In the part of the valley owned by the Arkwright Society there remain at least seven mills including a bleach works all of which were powered by water. It is not possible to say when the water power was first put to use but certainly by the 1600s, there was at least one mill in operation. The demand for water power reached its height in the late 18th century. The valley attracted investment on a substantial scale as entrepreneurs fought for sales on which to build their own cotton mills. Subsequently the mills were put to various uses including cotton spinning, bleaching, grinding corn, bone and minerals for paint manufacture. Cottages situated near one of the valley’s ponds, were created from a single building which once housed two lead cupolas with a counting house and smithy on the other side of the track.

Tuesday 6th September  Visit K National Stone Centre and CHPR

The National Stone Centre

The National Stone Centre was founded to illustrate the part of stone in the national economy, both as a building material, as a raw material in many products and as a chemical primary. The centre is located between Middleton and Wirksworth; the site is bisected by the course of the Cromford and High Peak Railway and on its southern boundary meets the mineral extension of the Midland Railway’s Ecclesbourne Valley branch. The site covers a series of quarries and lime kilns that worked at different times using various techniques through the area’s high quality lime stone. There are remnants of both standard and narrow gauge lines that served the site. There is a millennium wall area that shows 20 different types of regional dry stone walls.

Quarry Visits

There will be a tour of limestone quarries in the Wirksworth area viewing Dene quarry, Middleton Quarry and the entrance to Middleton Mine the Hopton Wood Stone sheds, Middle Peak Quarry, where the 1950’s plant is currently being demolished, Stoney Croft Quarry, Baileycroft Quarry and the rail transfer points.

15 AIA 2005 Derbyshire Tour Notes
Cromford & High Peak Railway – Middleton Top Winding Engine

The Cromford and High Peak Railway was opened in 1831 to connect the Peak Forest Canal at Whaley Bridge with the Cromford Canal at High Peak Junction. Built at the end of the canal age it was effectively technically obsolete before it was opened. It was built as a horse worked railway with long nearly level sections connected by inclines worked by stationary winding engines. Sections of it, however, survived until 1967 to service the local limestone industry. The winding engine at Middleton Top is the sole survivor of 8 engines supplied to the railway by the Butterley Company. The hexagonal, gritstone, engine house, situated at the top of the 708 yard 1 in 8 incline, contains a twin cylinder low pressure beam engine built in 1829. The engine has two 23” x 64” cylinders which were supplied with steam at 5 p.s.i. Beneath the engine is the winding drum for the endless cable haulage system. It ran until 1963, hauling wagons up the adjacent Middleton Incline. The engine was restored by members of the Derbyshire Archaeological Society and the Middleton Engine Group. The engine is one of the only in situ railway winding engines and probably the oldest rotative engine still on its original site. Adjacent to the engine are a pair of Cornish Boilers served by a square chimney.

Cromford & High Peak Railway – High Peak Junction and Lea Wood Pump

High Peak Junction is situated at the point where the CHPR meets the Cromford Canal, at the foot of Sheep Pasture Incline. A series of buildings related to both the railway and the canal survive. At the foot of the incline is the workshop building of the CHPR, containing a section of the original fish bellied cast iron rail. Adjacent to the workshop is the tensioning equipment for the winding rope on Sheep Pasture Incline and one of the water tanks used to fill the railways fleet of tankers.

Alongside the canal is the canal to canal trans shipment shed. Externally it is in more or less its original condition; internally it has been converted into a residential field study centre. Just beyond the trans shipment shed is the Wigwell aqueduct over the River Derwent. The construction of this 80 foot span aqueduct caused Jessop appreciable problems as it developed serious cracks while being built in1793. Jessop attributed the failure to the very high purity of the local limestone used in the mortar but financed most of the repairs at his own expense. At the far end of the aqueduct the abandoned arm to Lea Mills joins the canal.

Opposite the trans shipment shed, on the other bank of the canal is Lea Wood Pump House. When opened in 1794 the Cromford Canal drew its feed water from Cromford Sough. Changes in the local lead mine drainage system caused this source to virtually dry up. In 1849 a beam pump was supplied built by Graham & Co of the Milton Ironworks in Elsecar, South Yorkshire, to pump water from the River Derwent into the canal. The engine, which is a 50” acting 10 foot stroke beam pump on the Cornish Cycle, was normally only run on a Sundays or when there was surplus water in the river so that it would not rob water from the local mills. The engine was in use until 1948. It was later restored to steam, first by member of the Cromford Canal Society, and then the Middleton Top Engine Group. The 56” plunger pump is capable of pumping over 30 tons of water a minute from the Derwent into the Canal. The engine is fully housed in a fine local stone engine house. Adjacent is the later boiler house which contains two Midland Railway locomotive type boilers installed in 1904. The octagonal 95 foot stone chimney has a cast iron crown incorporating a venturi to improve the draft.
Wednesday 7th September  Visit L  North East Derbyshire

(With North East Derbyshire Industrial Archaeology Society)

**Pleasley Pit**

Pleasley is on the eastern edge of Derbyshire where the river Meden marks its boundary with Nottinghamshire. The colliery was one of the later, deep mines developed in the Notts/Derby coalfield during the last part of the 19th as mining technology improved. The mineral rights for Pleasley were obtained by Stanton Iron & Coal Co. in 1871 and first coal raised in 1875 after two shafts had been driven to a depth of 520 yards (one later extended to 903 yards). The pit continued in production until 1983, the last four years seeing coal transported underground to nearby Shirebrook colliery.

Just prior to demolition, in 1986 the site was Grade II listed, with most of the roofing already off the winding houses but both steam winding engines almost intact. The preservation group, Friends of Pleasley Pit, was formed in 1995 and the site was recognised as a Scheduled Ancient Monument in 1996. A visitor centre is soon to be erected by English Partnerships and the yard area redeveloped, in the meantime the Friends are working to restore both steam winders to working order.

The North Winding Engine is the older of the two on site, having been supplied by Lilleshall & Co. Ltd, Oakengates, in 1904 but subsequently modified by Markham & Co. Ltd., of Chesterfield. It is a two cylinder (simple) horizontal engine (40" dia. & 72" stroke) with a 20ft diameter winding drum. There being no boilers remaining on site, it is currently turned over by an electric motor. The South Winding Engine was supplied by Markhams in 1922, having 36" dia. cylinders and 84" stroke, for winding drum 21ft. dia and 10ft wide. This engine has been stripped down with restoration currently in progress.

**New Bolsover 'model village'**

The village was built by the Bolsover Colliery Company from 1891 for the workers at the company's first pit. Founded by Emerson Bainbridge, the company went on to develop six collieries, the second of which being Creswell where a similar village was created to the designs of the same architect, Percy Houton. Both villages feature double rows of housing with co-op store, institute and central green area. Coal was delivered, and night soil removed, by a horse worked tramroad between the house rows. Schools and sports grounds were also provided and assistance given for the founding of Methodist churches. The LD&EC railway (with Bainbridge as its Chairman) also served the village; the station master's house being its sole surviving evidence.

**Bainbridge Hall**

The hall started life as an orphanage for miner's children, being left by Emerson Bainbridge to his son, Oswald, when he died in 1911. It has since been used for local community activities and re-opened in June 2005 after extensive repairs and renovation.

**Joseph Clayton & Sons (Chesterfield) Ltd.**

The first leather tannery developed by Joseph Clayton in Spa Lane, Chesterfield, was in business by 1853, although it is said to have been started in 1840. The larger Clayton Street premises being visited today were first opened in 1875 and many of the processes still being used date back to that era. On the death of the founder, Joseph Clayton, in 1889 the business passed to his two sons in whose hands it remained until 1925 when a group of local businessmen assumed control. Despite the factory being gutted by fire in 1913, the firm is still in business as a key specialist in production of high quality leather, commonly from water buffalo skins. The leather has been used for line-shaft belting, horse harnesses, railway carriage window straps and door hinges and has long been in demand for cricket balls. The company worked with Tim Severin to produce leather suitable for the hull of his curragh "Brendan" (finally dressing the leather after its oak tanning by Croggan's tannery in Cornwall) thus making possible in 1976/77 the voyage from Ireland to Newfoundland in the wake of Abbot Brendan's 6th century Atlantic crossing.
Close to Clayton's Tannery there is the surviving office block of Markham & Co. Ltd, makers of the south winder at Pleasley Pit. Started by Charles Markham in 1889 on a site developed in the 1870s, the firm went on to manufacture a wide range of machinery for the mining industry, including both steam and electric winders. Markhams also made the water turbines for the Dinorwig Pump Storage power scheme in North Wales as well as two tunneling machines for the Channel Tunnel. During WWII the company had built landing craft and four midget submarines for the Royal Navy, one of three inland factories chosen for the latter, the other two being Broadbents of Huddersfield and Marshalls of Gainsborough. The works closed in 1998 and the large site has become yet another housing development.

**Summerley Colliery Company’s Coke Ovens, Unstone**

Now a scheduled ancient monument, the bank of 48 ovens has recently been consolidated by inserting timber props within the most threatened ovens and cutting back of trees which have taken root on the structure. The colliery and its coke ovens opened on the arrival of the Midland Railway’s 1871 direct line from Chesterfield to Sheffield, with a branch to serve the collieries and other industries lining the Drone valley between Dronfield & Unstone. The colliery was short lived, closing in 1884 but it is thought that the coke ovens continued in production for some time thereafter.

While the four square based chimneys have all collapsed, almost all of the back-to-back beehive-shaped chambers (24 on each side) are still virtually intact, with portals and voussoirs of brick or stone, brick vaulting and brick-lined flues partly visible within.


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**Wednesday 7th September**  
**Visit M Erewash Valley**

**Ilkeston**

Like most of the early settlements in the Erewash Valley and its hinterland, Ilkeston was sited on the ridge above the valley well away from the wet and wooded floodplain. It obtained a market charter as early as 1252 and the large open market place continues to dominate the town. The associated October hiring fair continues to be marked by a celebrated funfair.

Historically the town developed many of the trades and industries associated with early market towns including a small textile industry and out of this developed first a substantial framework knitting industry and then in the 19th century a very significant lace industry. Coal was mined on a small scale from an early date but again the main expansion took place in the 19th century with the development close by of the major Stanton ironworks complex.

The town was served by a branch of the Midland Railway from the main Erewash Valley line, opened in 1849, and by the GNR's Derbyshire Extension Railway of 1878. Historically the town was also known as a minor spa, the principal thoroughfare being Bath Street.

Despite the disappearance of the coal industry and contraction of the textile industry, and the inevitable losses to modern development, much remains in the town to remind us of its industrial past and our walk across the town will take in three major textile sites of varying dates and reminders of the Great Northern Railway.
Midland Railway Centre – Butterley

The Midland Railway Centre had its origins in a museum project initiated by Derby Museum in 1970 to celebrate the Midland Railway Company through an appropriate piece of demonstration working railway line with authentic locomotives and rolling stock and contemporary line side structures and signaling. The residual stub of the Pye Bridge-Ambergate line was identified as the working line and the large, diverse centre, now known as Midland Railway - Butterley, has evolved over the last 30 years from these small beginnings.

The Swanwick part of the site is developed on an area of land reclaimed from former colliery tips - Britain, Brands and Western Pits - together with the substantial “Country Park” area stretching down to Golden Valley. The Golden Valley Narrow Gauge Railway uses a substantial section of the tracked of the former Butterley Company private railway which linked its enterprises at Codnor Park and Butterley. This was originally a horse drawn tramway dating from the early years of the 19th century.

Golden Valley

In its early years, the Butterley Partnership - originally Benjamin Outram & Co. - relied on scattered rows of housing built close to its various enterprises, to house its workers. Communications in the Erewash Valley in the 1790s were poor and the main contemporary transport artery was the Cromford Canal, opened in 1792-3.

The stone rows at Golden Valley are the earliest known surviving examples of Butterley housing, dating from the late 1790s. The partnership took an early lease of the coal and iron mines on the Codnor Park estate and these houses were built for workers at the coal pits. Later rows of brick cottages were added in the 1830s and 1840s as the Company’s activities continued to develop.

The housing at Golden Valley was condemned as unfit for human habitation in the early 1970s but a vigorous campaign by local societies together with the advent of the Conservation movement, resulted in a major restoration project under the auspices of the Derbyshire Historic Buildings Trust.

Ironville

Ironville was the Butterley Company’s model village built between 1834 and the early 1860s to house the workers at its Codnor Park ironworks. This supplemented the isolated rows of housing referred to above which had become increasingly inadequate as the Company’s enterprises continued to expand.

The catalyst for the expansion was Neilson's “Hot Blast” of 1830 which brought about a major period of growth at Codnor Park ironworks. In its heyday, Ironville boasted a full range of amenities provided by the Company including a school (1841), Mechanics Institute and Library (1848) and church (1852).
Thursday 8th September   Visit N   South Derbyshire & Rolls Royce

Ticknall Limeyards and Tramway

Quarrying activity at Ticknall has taken place for many centuries and references exist as far back as 1462. Inventories of the 17th and 18th century include those of lime burners, but expansion took place at the end of the 18th century. Maps of the village prior to 1777 do not show any kilns but in a land tax assessment of 1780 Gilbert Hutchinson is listed as a lime burner his lime works are shown on a map of 1799. The further development of the industry had to await the arrival of better transport in the area. Early plans for the Ashby Canal show a branch to Ticknall. When the canal was eventually built this was replaced by a tramway. The canal company called on the services of Benjamin Outram and following his recommendations the route was laid out in 1798 and finally opened in 1802. The 4ft 2 in gauge horse worked tramway was built using stone blocks and L shaped cast rails. It ran from the canal at Willesley terminating in the Ticknall area with branches to other quarries in the area.

Following the opening of the tramway the growth of the lime works is difficult to trace from documentary evidence so maps need to be relied upon. The tithe award map of 1843 shows at least nine operational lime yards. Sir George Crewe of Calke Abbey seems to have adopted a policy of buying out the freeholders and between the 1830s and 1850s acquired the free hold of most of the lime yards. At the time of the first edition 25" OS map of 1882 the yards were probably at their greatest extent with eleven separate lime yards. After this date the industry appears to decline rapidly and by 1891. This was probably caused by the small yards and small and antiquated kilns coupled with an obsolete tramway being unable to compete with the large rail linked quarries of the peak district.

We will follow the course of the tramway into one of the lime yard areas through the worked out quarries and past several kilns to emerge at the point where the tramway passes under the main drive into Calke Abbey.

For further information see The Ticknall Lime Industry, Palmer and Neaverson, bulletins of LIHS 10 & 12.

Rolls Royce Aero Engines

If the silk industry symbolises Derby industry in the 18th Century, and railways the 19th Century, then Rolls Royce represents the 20th Century. The company transferred car production here from its original home in Manchester in 1908, partly as the result of a deliberate attempt by the local Chamber of Commerce to attract new employers to diversify the industrial base of the town. Aircraft engine manufacture came with the First World War, and in 1945 car production moved to Crewe. Later expansion was on a new site at Sinfin to the south of Derby, and after some difficult times in the 1970s the aero engine business separated from the cars and re-established itself as a world leader in its field. It remains a major employer in the city.

Rolls Royce Heritage Trust

The Rolls-Royce Heritage Trust was established in 1981 by a small group of employees who took pride in the company's past achievements. The company agreed that action was necessary to ensure that the record of past endeavours was not lost, but circumstances at the time made it
difficult to establish a formal Heritage Department. When the employees proposed the setting up of a Trust as an independent extramural body, the initiative won the full support of the company. Space was found and other services provided, and the Trust began to grow.

The collection assembled by the Derby Branch of the Trust contains a representative selection of Rolls-Royce Limited aero-engines and sectioned parts, from the formation of the Company to the present day. Currently are included Eagle, Hawk, Kestrel, Merlin, Griffon and early gas turbines such as Welland and Derwent. Plans are in hand to expand the collection to include Conway, Spey and the RB211 family as well as early car engines. Original oil paintings and a variety of aviation artefacts complete the exhibit which complements the comprehensive collection of Derby designed aero engines held on the Company’s behalf by the Derby Industrial Museum.

The Rolls-Royce Learning and Development Centre on Wilmore Road is now the home of the Heritage Trust exhibition area. The exhibition area was set up so that the Heritage Trust could ‘open its doors’ and allow people to see the work the Trust is involved in and the exhibits that have made Rolls-Royce the company it is today.

**Rolls Royce Nightingale Road Factory**

The original 1908 building constructed by Handysides remains behind the office block; other blocks are dated 1910, 1912 and 1920. The centre of the main façade was rebuilt in 1938 with a new entrance hallway and stairs, known as the “marble hall”, to impress important overseas customers. Since the Second World War this has contained an impressive and evocative Memorial Window, depicting an RAF fighter pilot standing on a propeller with the roofs of the factory below.

The future of the Nightingale Road site is now uncertain as Rolls Royce plans to concentrate its activities on the more modern sites to the south of Derby over the next few years.