North East Derbyshire Industrial Archaeology Society

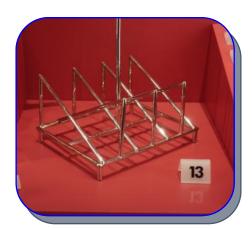


NEDIAS Newsletter No. 71 - August 2018 Price: £2.00 (Free to Members)



Sheffield's Metalworking Legacy — Part 2 Derek Grindell

Derek's visits to the Millennium gallery to view and photograph Sheffield's metalworking legacy brightened our May newsletter with some of the stunning examples to be seen there. He follows this in Part 2 with further examples of incredible workmanship.



13 Toast Rack

Designed by Dr. Christopher Dresser, made by James Dixon & Sons, Sheffield. Electroplated nickel silver 1879 - 1883.

Dr. Christopher Dresser was a writer, scholar and innovative designer. He sold around 37 different designs to James Dixon & Sons, which could be made in either silver or the cheaper electro plate.



8, 9 Bowie Knife

Made by W & S Butcher, Sheffield in Steel and Bone c1850. They were made for the American market.



28 Cheese Toaster

Maker unknown c1800. The six small trays can each hold a piece of bread and cheese. When placed on an open fire the heat reflects from the open lid, toasting the cheese.





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https://www.facebook.com/nediaschesterfield/?fref = ts

WHAT'S ON?

NEDIAS Lecture Programme

eetings 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, 8 October 2018	Cliff Lea: "This year – the Centenary of the Chesterfield area oilwells"
Monday, 12 November 2018	John Barnatt: "Excavating a late 18th century Newcomen Engine at Watergrove Mine"
Monday, 10 December 2018	Christmas Meeting. Short talks from members – and mince pies.
Monday, 14 January 2019	John Lower: "The building of the Dawn Rose"

Other Diary Dates

Thursday, 13 September 2018	Chas Arnold: "The Derwent Valley and other World Heritage Sites". Arkwright Society lecture, Gothic Warehouse, Cromford Mill. Booking events@arkwrightsociety.org.uk or call or 01629 823256. £8. 7:00pm for 7:30pm
Saturday, 15 September 2018	DAS visit to Morley Park Blast Furnaces as part of Heritage Open Days. Info at www.derbyshireas.org.uk/Events.html
Saturday, 22 September 2018	Local History Day at Chesterfield Museum
Thursday, 27 September 2018	Paul Halksworth: "Sutton Scarsdale Hall and the Arkwrights" . Brimington Community Centre, S43 1DB. 7:30pm
Wednesday, 31 October 2018	NEDIAS visit to Barrow Hill Roundhouse

NEDIAS VISITS

Visit to Barrow Hill Roundhouse, Wednesday 31 October 2018

Date is confirmed for a private visit for NEDIAS members to Barrow Hill Roundhouse – we are honoured!

We will meet on site at 10:00am for initial welcome address, and possible attractions may include:

Interesting items may be pulled out of archives for our view – outline of the HLF work and exhibits recently carried out – view the roundhouse building and turntable itself (they usually allow visitors to "have a go" at turning the turntable) – see the rolling exhibits dating from 1878-1989 – view the restored workshop. Who knows, we may also be offered a brake van ride behind a diesel loco

Keep this date free, and sign up on the Visit Sheet at next meeting or book with Brian Dick, 01246 205720. There is a minimum £5 donation, and numbers will be limited.

Visit to Chesterfield Museum "Large Item" store to view Bryan Donkin archives

Following the excellent talk earlier this year on the history of Bryan Donkin, NEDIAS arranged with Chesterfield Museum to view on 19 July the larger Donkin items held in the Museum's off-site storage facility. Terry Woodhouse – previous Donkin managing director - gave a really excellent account of many of the items as we moved from one to another. Below he describes just some of these; Terry's script is accompanied by photographs from Derek Grindell.

Rack and Pinion Valve (Fig 1)

Although the gas supply industry would eventually become Bryan Donkin Company's principal customer base, the Company's involvement with this marketplace did not begin until 1847 some 35 years after the commercial birth of the industry in the form of the London based Gas Light and Coke Company.

By 1823 however, there were four gas manufacturing companies in north London and in 1847 it was at the behest of one of these, the Chartered Gas Company, that Bryan Donkin's three sons John, Bryan and Thomas designed a valve which for many years continued to adequately serve the needs of the gas supply industry and by 1925 over 1000 tons per year were being produced at the Derby Road site.

Although many design improvements were introduced during its lifetime, the sound basic principles of the valve remained unaltered.

Baurer 2" Valve (Fig's 2 & 3)

This valve is named after the Bryan Donkin employee who was responsible for its design.



The main feature of this valve is that it has two "doors" – one seating on the upstream face of the valve and the other on the downstream face. The two doors on closing being pressed against the sealing faces by a floating wedge system. With the valve in the fully closed position, the valve could be purged with an inert gas, thus permitting work to be carried out on the downstream side of the valve in the secure knowledge that even if there was minor leakage past the



downstream door, the gas would be inert.

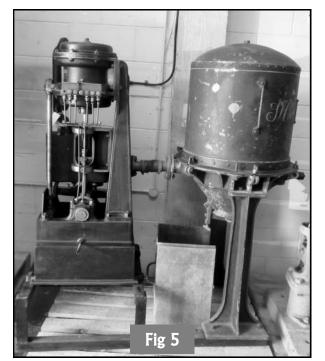
In 1866 John Beale patented improvements which he had made to Joshua Beale's patent of 1848 and Bryan Donkin Company obtained the sole manufacturing rights for this improved design in 1870.

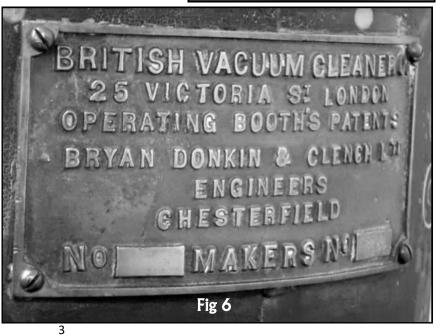
By 1877, the same John Beale patented significant improvements and shortly after his retirement, Bryan Donkin Company purchased his business and continued to manufacture the "77s" until the late 1950s.

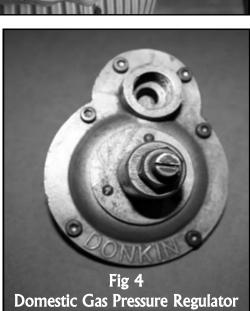
Many of these exhausters, often used to pull the very dirty gas directly from the retorts were driven by Donkin produced steam engines.

Early Vacuum Cleaner (Fig's 5 & 6)

The name plate on this steam engine driven vertical reciprocating vacuum pump showed that it was built by Bryan Donkin and Clench Ltd., Chesterfield.







In 1803, when Bryan Donkin formed his company in Bermondsey close to London's River Thames there were no railways and the Thames was convenient for the transport of heavy materials.

By the end of the nineteenth century however transport systems and the availability of raw materials such as coal and iron in the heart of Derbyshire brought about the transfer of Donkin's business to Chesterfield.

In 1900 agreements were signed for an amalgamation with Clench & Co. Ltd. of Chesterfield, a firm founded in 1896 by Mr F Clench for the manufacture of high speed steam engines and boilers. The company was known from 1900-1905 as Bryan Donkin and Clench Ltd.

The move from London was started in 1900 and completed by 1902 into buildings that were remarkably modern for their time. The machine shops were nearly 400ft long and 40ft wide and they were directly aligned with, and at a slightly lower elevation than the foundries, to facilitate easy transfer of the castings to machine shops and fitting bays.

From 1906, the company was re-formed under the title of "The Bryan Donkin Company Ltd." and the Clench association ceased.

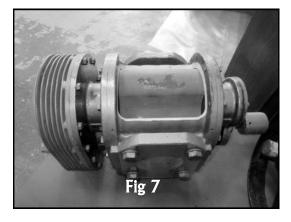
From this small section of the company's history, we can deduce that the vacuum cleaner unit must have been built during the first few years of the twentieth century.

These vacuum pumps, the fore-runners of today's Hoovers and Dysons were generally housed in the basements or cellars of large houses, hotels and commercial premises including Royal residences, with a ring main connecting with the many rooms of the building. A portable length of hosepipe with a suitable endpiece was then connected to the ring main close to the area being cleaned! (I don't think any of Mr Dyson's patents infringe our unit!).

Connersville (Roots Type) Blower (Fig 7)

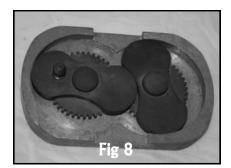
At the end of 1920, production for the Simms Motor Company ceased at Donkin's and the vacated sections of the works became an extension to the foundry to accommodate a new contract to supply castings to the Huddersfield based company, W. C. Holmes & Co. Ltd.

In 1926, W. C. Holmes secured the rights under licence for the patents covering the manufacture of meters, blowers and exhausters from the Connersville Blower Company of Connersville, Indiana, USA, and a manufacturing agreement was entered into between Donkin's and W. C. Holmes.



The machines have two gear connected figure eight rotors which rotate in relation to one another with very close clearance between them.

Model of Roots exhauster showing figure eight intermeshing rotor cross-section (Fig 8)

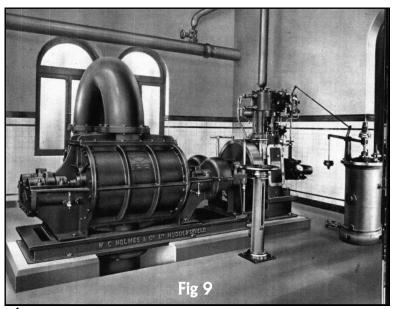


The volume swept by the rotors within the casing is of known value thus the machines may be used to convey known volumes of gas or to record

v o 1 u m e delivered (i.e. metered) if the gas itself causes the rotors to rotate.

W. C. Holmes installation (Fig 9)

Huge volumes of blowers, meters and exhausters were manufactured at the Derby Road site until around the end of the 1970s when the longstanding association with W. C. Holmes under the public holding company, B.H.D. Engineering, ceased following the sale of the group.



Railways to Barlow

Adrian & Gina Clarke (courtesy of John Trenter)

any people are unaware that the railway ever reached Barlow. In fact Barlow had two railway lines and was connected to both the LMS and the LNER systems. The impetus came through the Dunston and Barlow Mineral Co. Ltd., founded in 1859, and correspondence between the Fowlers of Whittington Hall and the Plevens Company indicated that in 1862 work was only proceeding slowly on the railway system. It must have opened soon after.

A junction was opened on the Midland line both North and South and continued westward following the river valley, crossing the Whittington Road and entering the Sheepbridge works area. Sheepbridge originally had a 3ft gauge series of lines and a four-wheeler locomotive called Little Nell manufactured by Manning Wardle of Leeds which cost £775.

The Main line was extended to the iron pits in Cobnar and Rough Piece Wood. A junction was made at Cobnar with one line going to the mine at Nesfield and the other to the mine at Monkwood.

This later was extended to Lea Bridge and Crowhole Colliery although the OS always show this as a tramway.

From Monkwood two other tramways or inclined plains were constructed. One went to Monkwood No 2 and the other to Barlow Lees Mine. Evidence of the latter can still be seen although much has been obliterated by development.



Dunston Barlow North Box

Some years later when the LNER reached Chesterfield a junction was made by the short Canal Branch to sidings in the region of Lockoford Lane which necessitated another bridge over the road to Brimington.



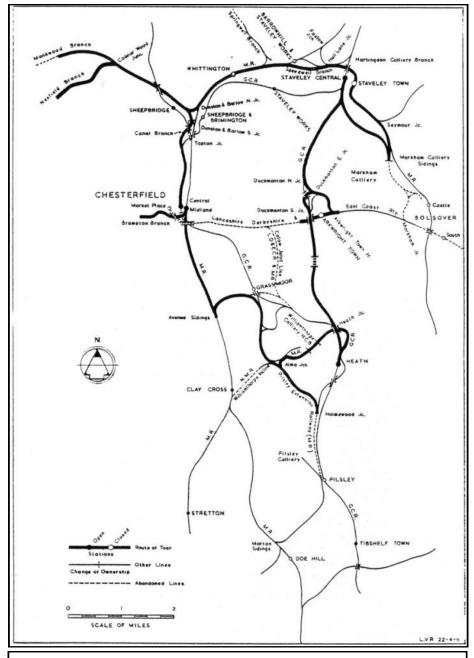
There is no evidence that any passengers were ever carried on these lines, but a passenger train did reach Barlow on one occasion. This was June 17 1961 when a two car diesel train was used to convey the Sheffield Branch of the Railway Correspondence Society on a grand tour of industrial line in North Derbyshire. They reached Nesfield but were unable to complete the last 300 yards to Monkwood owing to weeds and the poor condition of the line.

... and now read on to learn more about this one and only two car diesel train visit to Barlow!

The North Derbyshire Rail Tour of 17 June 1961

The Barlow rail visit of almost 60 years ago outlined by Adrian and Gina Clark, sparked more than a little enthusiasm in your Editor. I was interested to search for some background to the visit, and Nick Wheat has very kindly sent to me copious information about this event, and has asked that we also credit the late T. John Edginton; I am indebted to Nick for the material in the following précis.

It seems that this Rail Tour had been organised by the Sheffield Branch of the Railway Correspondence and Travel Society. It started from the Midland Goods Station at Chesterfield, almost on the site of the original North Midland station of 1840. The schedule write-up mentioned that there was nothing remaining of the station except the old goods office. The route was to set off and diverge straight away to the Brampton Branch, described as an independent railway promoted by local mill owners in 1870, taken over by the Midland Railway in 1871 and fully opened in July 1873. They crossed over the GCR Chesterfield loop – the famous bridge of the local Dukeries Line demolished the previous year was on their left – and crossed under



ABOVE: The map of the tour supplied to participants.

the LD&ECR, running parallel with it for a short time. They mentioned the many private sidings seen along the line, probably coming as far as the current Morrison's site before retracing tracks to Chesterfield.

They crossed to the up slow Midland main line and proceeded to Avenue sidings, the transfer point for the heavy traffic to and from the large N.C.B. coking plant nearby. They reversed at this point and, having picked up a pilot driver from Staveley (Barrow Hill), progressed via No. 11 siding to the steeply graded line to Grassmoor, Alma Junctions and the Pilsley extension as far as Holmewood Junction. Following a reversal, the south-eastern spur was used at Alma Junction to bring the tour onto N.C.B. track at Williamthorpe Colliery, where a stop was made to enable photographs to be taken of Class 0F 0-4-0ST No 47003, which spent most of its life working at Williamthorpe.

Cautious running through the colliery yard was apparently now the rule, and eventually a connection was made with the main G.C. line at Heath Junction, where they again reversed and proceeded rapidly along the main line to the complicated system of fly-overs at Duckmanton, via which access to the one time main line of the L.D & E.C.R. was obtained. This section of track east and west of Arkwright Town station was reported to be still in

reasonable repair and to be used by goods trains. After going as far East as stored wagons would allow, reversal was effected to enable a stop to be made in the derelict Arkwright Town station. From there they travelled by the E. and N. Duckmanton Junctions to regain the main G.C. line which was followed as far as

Staveley Central. Departing Staveley, the G.C. shed was passed on their left, and several Society members were gratified to see a number of black and yellow striped locomotives at this point. They then proceeded rather cautiously down the somewhat overgrown G.C. Markham branch and, after some assistance to prevent slipping, made entry into Markham Colliery yard, where, after reversal, they followed the Midland lines to Seymour Junction and, for a short distance to Hall Lane.

The railcar made short work of the climb



LEFT: The unit at Brampton Goods

to Summit sidings and on joining the "Old Road" close to Staveley works ran rapidly to Dunston and Barlow North. Here they left the main line, and travelled via Sheepbridge Works to Cobnar Wood Junction and the Nesfield branch to the end of B.R. metals.

After reversal, they retraced their path to Cobnar Wood Junction, where again they reversed and proceeded up the Monkwood branch, but unfortunately could not reach the limit of the branch as a combination of rising gradients and squashed weeds overcame the diesel some three hundred yards from the end of the line.

A final reversal brought the tour back to Dunston and Barlow, where connection



The Unit passing Queen's Park

was made with the G.C. Sheepbridge Canal branch which was followed to its junction with the G.C. Chesterfield loop at Sheepbridge Sidings box. A few minutes wait sufficed to allow a Sheffield-Nottingham local to get clear, and they drew into Chesterfield Central station <u>a few minutes ahead of time</u>.

Let me repeat, a FEW MINUTES AHEAD OF TIME!

You can see more information about the Rail Correspondence and Travel Society at www.rcts.org.uk. They are still most active, but perhaps not planning the same sort of tour; and the local East Midlands branch have very regular meetings in Nottingham.

Chairman's Chat

Cliff Lea

here are many fascinating features of the NEDIAS area, endless sources of items for research. Whilst I was at the recent Dronfield Local History Fair I met up with members of Totley History Society, and they mentioned to me some features of the landscape on Totley Brook which have puzzled their members for many years.

Briefly, there are 100 or so standing (some prone) stone posts straddling or near the brook in Gillfield Wood - and there is an enigma regarding their purpose or function in this ancient woodland southwest of Totley. I'd not previously heard of theses stones, but maybe there are members of NEDIAS who could shed a little more light?

The Totley Brook, from its origin west of Dyson's Refractory to its confluence with Old Hay Brook to the River Sheaf, is fed by 14 small tributaries, five of which are major. Of course maintenance of water and water

power was extremely important for the many downstream industries running out of the Peak District and into Abbeydale and Sheffield. It's thought likely that the function of the stones is for filtration and/or management of water flow. Filtration because of the mining activity in the area, and massive amounts of silt generated. The posts are in pairs roughly 5ft high, and have notches in them which it is widely assumed accommodated a couple of 3 or 4 inch wooden beam crossmembers, secured by bolts. They also have evidence of bolt holes on their tops, suspected for securing a further wooden cross-member.

The Friends of Gillfield Wood recently carried out investigation funded by HLF and you can see the 2017 final report on their web site at www.friendsofgillfieldwood.com/phase-2-survey/. The most likely purpose of the posts was as support for straw or foliage filtration systems to control silt in the brook, to reduce silting up of mills, water courses and industry downstream - to serve as perhaps Ganister traps from the mining activity above the A621 Baslow Road.

But this is unproven, and despite the HLF funded report with input from a number



Photo from Friends of Gillfield Wood's Final HLF2 Report on Gillfield Wood's Stone Posts

of specialists, they still can't definitively say what the real purpose of the stone posts was, nor who erected them, nor even when they were erected, or why the posts had not been included in any other surveys or maps. That great local historian David Hey must have known of them, after all he didn't live too far away, but I can find no reference to the stones in his books.

So, is there a member of NEDIAS who can help with more definite information, and help to answer some of these questions? Do drop me a line!

Looking forward to seeing you at our talks over the winter, amongst others we've got great speakers on the subjects of the area's glass manufacture, on an excavation on site of the Watergrove Mine Newcomen Engine and interestingly on the area's timber industry.

Concerning wooden water pipes

Diana Allen

am presently reading a book called "*Transformation of a Valley – The Derbyshire Derwent*" by Brian Cooper published in 1983. Early in the book the author describes the venture in 1704 of Thomas Cotchett to build a silk mill in the middle of Derby to "power-manufacture spun silk". A gentleman called George Sorocold from Lancaster was engaged to install the power supply – a 13.5 ft waterwheel – and associated transmission.

Mr Sorocold had installed Derby's first public waterworks driven by a waterwheel in 1692. Four miles of pipe made from bored-out elm trees distributed the water. A little later Sorocold took out a patent for a water-driven boring machine to manufacture the pipes. By 1700 he had provided similar waterworks in a number of other towns and cities including the reconstruction of the London Bridge waterworks in 1701.

Imagine my surprise on arriving at Chesterfield Museum's large item store in Hasland to view the Donkin archive items to see, immediately inside the doors, two large sections of bored tree trunks. Maria Barnes, the Museum Collections Officer, who had opened the store for the NEDIAS visit was able to supply the following information: "the wooden pipes were found in the 1980s and are from Eyre Street in Hasland. They are elm and our records have a vague date of the 16th-18th century". What a co-incidence that I should see these pipes a day or so after reading about the same and in this photograph (taken by Cliff Lea) should be able to see clearly how such pipes were joined together.



Ditherington Flax Mill, Shrewsbury– and a connection to Derbyshire

Cliff Lea

It is now 220 years since the world's very first iron frame building was erected at Ditherington, Shrewsbury. It's a Grade 1 listed building and has global significance for its revolutionary fireproof structure, but has been "at risk" for many years. This year following much local activity restoration has begun in earnest. You can see the start made in photo overleaf from *The Shropshire Star* of 11 April 2018.

The Mill is sometimes referred to as Bage's Mill, and has quite a connection to Derbyshire. Charles Bage was born in 1752 into a Quaker family. His father Robert was a Darley Abbey paper manufacturer who later moved to Elford just east of Lichfield to establish a papermaking business. Whilst there in 1764 Robert joined in a partnership with Erasmus Darwin to develop Wychnor Ironworks; the Bage family therefore were on the periphery of the "Lunar" men.

Charles, who developed a life-long friendship with Erasmus Darwin's son Robert, clearly would have been party to discussion of latest industrial and scientific advances, and through his father's business well aware of the potential of use of iron in construction. Charles also developed a close friendship with William Strutt, son



Work starts (Shropshire Star, 11 April 2018)

of Jedediah. Early cotton mills were plagued by conflagrations caused by the combustible and explosive character of cotton dust. William Strutt became renowned as a brilliant engineer and for his work on fire-proofing for textile mills. When Thomas Evans's Darley Abbey cotton mill burnt down in 1788 it was rebuilt using iron sheet to cover wooden beams. When the Strutt's west mill at Belper was built in 1795 it went even further, with cast iron columns, tiles and plaster floors as well as the encased wooden beams. But there was one step yet to make and that was to construct using a complete iron frame - this was the step that Bage was to make.

Charles Bage's career had led him to become a wine merchant in Shrewsbury when he moved there in 1781, but was

also known as a surveyor. Probably through this latter activity he became on close terms with many of the important Shropshire engineers, including Thomas Telford and William Hazeldine. Hazeldine started as a millwright, but moved on to become the famous ironmaster who was later to supply iron castings for Telford's Menai Bridge, for many more of his other bridges, and for the troughs for his Pontcysyllte Aqueduct. When John Marshall and the Benyon brothers built the flax mill at Ditherington, it was Bage who was to be architect. Bage was the man with his knowledge of pioneering work in Derwent Valley mills, of the early fireproofing; he had deep knowledge of use of iron for construction, had direct connections to iron producers and he was the man of the time, who particularly had the right network of engineering contacts.

The rest is history. The five storey Ditherington Flax Mill was built in 1796-1797, it used 204 cast iron columns, 136 iron beams, and 19 iron roof sections, with a myriad of other iron parts – all cast by Hazeldine to Bage's design. It's now regarded as the building upon which construction of the world's skyscrapers is based. **And all with a connection back to Derbyshire**.

IA News and Notes

Wingfield Station - Good news!

It must be good news. Amber Valley Council has served a Compulsory Purchase Order on the owner of Wingfield Station in South Wingfield. It follows unsuccessful attempts to get the owner of this listed, Grade II*, very early station to make essential repairs – it has long been regarded as a "building-at-risk". The Council has secured a partner with the right expertise and funding so that preservation work can surely start. Wingfield Station was originally built by Francis Thompson on behalf of the North Midland Railway, opened in 1840, but has been derelict for quite some considerable time. Historic England's listing statement includes the following information about the station:



Copy of the Loudon lithograph of the station, by courtesy of the South Wingfield Local History Group

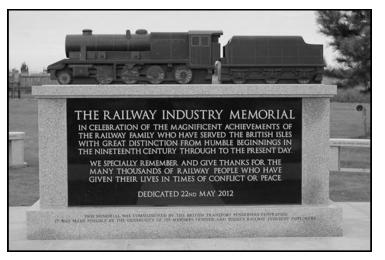
"Robert Stephenson delegated to him (Francis Thompson) the design of the 24 stations along the line from Derby to Leeds. These formed a notable sequence of picturesque buildings in the tradition of lodge or gate-keeper's cottages on country estates. Wingfield is the only station of this group to survive. Thompson commissioned the artist Samuel Russell to produce a series of lithographs of some of the stations, including Wingfield, which was also reproduced by J. C. Loudon in

a supplement to his influential Encyclopaedia of Cottage, Farm and Villa Architecture (1842) where it was slightly amended as a suitable model for a suburban villa.

"Wingfield Station originally consisted of the station building and the station master's house to the south. A small building in a similar style was added to the north of the station, probably soon afterwards. It is likely that this was used for parcels as there is a raised area on its north side, accessed via a flight of steps. The station was closed in 1967 and is now in private ownership."

National Memorial Arboretum and the Burma Railway

isitors to the National Memorial Arboretum, will be interested to learn that whilst the 170 acre site houses some 350 memorials and memorial gardens, by no means all are related to particular regiments or to the armed forces.



Railway Industry memorial – Class F8 Loco

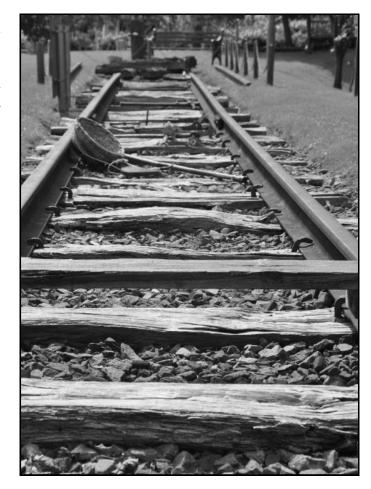
suffered. Of particular interest is the Burma Railway Memorial, actually constructed from 100 ft of the original track brought to the Arboretum by HMS Northumberland from Thailand in 2002 together with original wooden sleepers, and the whole was constructed here by veterans who had worked on this infamous "railway of death" – they must have been well over 80 years old when they re-laid this track here in

BELOW: Burma Railway Memorial - Original track re-laid here by

RIGHT: Sumatra Railway Memorial.

Of interest to NEDIAS members is the memorial to the railway industry whose plaque toasts "the magnificent achievements of the railway family who have served the British Isles with great distinction from humble beginnings in the nineteenth century through to the present day". The sculpture is based on a Class 8F locomotive and was commissioned by the British Transport Pensioners Federation.

Also on site is a large area with displays commemorating those lost in the far-east. The Sumatra Railway memorial was designed by Jack Plant who was captured by the Japanese and forced to work constructing the 100 mile railway during which 700 of his fellow POWs perished. The exhibits show in graphic detail the deprivations Memorial, actually constructed from 100 ft of the



Britain. This must have been an incredibly difficult task for them mentally, probably brought it all flooding

I think we spent some five hours on site, certainly not seeing it all, but left with many memories, particularly of the "Shot at Dawn" memorial to those young men who when shell-shocked in the trenches during WW1 and unable to "go over the top" were arrested and shot at dawn; some were mere boys, only 16-years old. If you haven't yet visited, it is a must. It's recommend that on arrival you immediately take the road train around the site, it's a 50 minute trip which has great commentary. This overview assists in helping to decide what you might like to see afterwards in your own tour around the site, for which the official Audio Guide is also great help giving much additional information.

The Chilwell Explosion of 1918 - this year's grisly Centenary

In 1916, the government's Ministry of Munitions set up an enormous shell factory at Chilwell, Nottingham. It covered almost 200 acres, and at its height Chilwell's National Shell Filling Factory No.6 employed 7,500 people, filling shells with TNT to cope with the military's massive use of shells - on the first day of the Battle of the Somme alone, some 250,000 shells were fired. Chilwell itself was the most productive shell factory of all during the war. Because of the toxicity of TNT, the mainly women workers suffered greatly, termed "canaries" for their yellow jaundice colour, and it's said over 100 died from the lethal affects of TNT alone. You can see the extent of production in the photograph recording a visit by King George V shortly after the factory first opened in 1916.

However, the Chilwell factory became infamous for a massive and catastrophic explosion which took place in July 1918, just 100 years ago - this year marks this grisly centenary. The blast killed 134 workers, and injured a further 250 – it was the largest single loss of life from an accidental explosion during WW1. Some 8 tons of TNT had detonated without warning, flattening large parts of the plant. The blast was heard 30 miles away, and it damaged housing in a 3 mile radius around. An eye witness recalled '... Men, women and young people burnt, practically all their clothing burnt, torn and dishevelled. Their faces black and charred, some bleeding with limbs torn off, eyes and hair literally gone...'

The extant of the devastation was kept quiet during the war, and reports to the press simply recorded a minor explosion at a Midlands factory with limited loss of life. But in Nottingham the event demonstrated remarkable spirit, and production was up and running again by the following day, and it's reported that within one month of the explosion, the Chilwell factory achieved a record weekly production level.

Winston Churchill sent a Telegram of condolence to the families to say:

"Please accept my sincere sympathy with you all in the misfortune that has overtaken your fine Factory and in the loss of valuable lives, those who have perished have died at their stations on the field of duty and those who have lost their dear ones should fortify themselves with this thought, the courage and spirit shown by all concerned both men and women

command our admiration, and the decision to which you have all come to carry on without a break is worthy of the spirit which animates our soldiers in the field. I trust the injured are receiving every care."

In Parliament a week after the catastrophe, it was recommended that the site be awarded the Victoria Cross - this award never took place, but in later years the works was always fondly referred to as the VC Factory. It continued as a Royal Ordnance Factory, and is currently Eastern HQ and barracks for the Infantry Brigade, due to close in 2021, ending a proud record for the site.

Photo: King George V visits Chilwell Shell Filling Factory, December 1916 (Courtesy of Historic England)



And finally Chesterfield Museum Archives

he NEDIAS members who visited Chesterfield Museum's "Large Item Store" in July saw all sorts of other amazing exhibits, where some of the larger chunky archives which cannot be shown in the Museum are stored.

One of the non-Donkin items we noticed was a strange machine which could have come from the imagination of the famous illustrator and cartoonist Heath Robinson. What do you make of the item in this photograph? Said to have been a plough, it appeared to have been made from an old tricycle, pram wheels and other assorted parts.



Ideas please for the best imaginative use for which this machine could have been made!

Contributions, no matter how short (maybe about a visit you have made), and preferably by email to cliff@nedias.co.uk, for inclusion in future editions of this newsletter are most welcome.

COPY DEADLINE FOR THE NEXT EDITION: 5th October 2018

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