Industrial Archaeology Tour
Notes for Cheshire

Edited by Michael Nevell and David George
Industrial Archaeology North West

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Front Cover illustrations: left to right:
top row: Bunbury Mill; Macclesfield Canal access bridge near Poynton;
Styal Mill village;
middle row: Quarry Bank Mill; Lion Salt Works; Daneinshaw Mill near
Congleton;
bottom row: Westminster Motor Works, Northgate, Chester; Acton Swing Bridge; Brunner Mond Works in Winnington.

Back Cover illustration: a map of the industrial archaeology of Cheshire. Reproduced with the permission of the Cheshire Historic Environment Team.
## Chester 2014

**Association for Industrial Archaeology**  
**41st Annual Conference**

### Industrial Archaeology Tour Notes for Cheshire

#### 2014 Tours & Evening Talks Programme, 6th to 10th September

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Chester 2014, the AIA 41st Annual Conference

‘The Archaeology of Chemicals & Textile Finishing’
(The 20th CBA NW Industrial Archaeology Conference)

Friday 5th September. Venue: Beswick Building, Parkgate Campus, Chester University

Seminar Programme

9.30: Registration, tea and coffee

10.00: Introduction

10.10: ‘The Archaeology of Salt in Cheshire’ – Andrew Fielding, CBANW IA Panel

10.50: ‘Roman Salt Production at Middlewich – recent excavation work’ - Oxford Archaeology

11.30-11.40: Break

11.40: ‘The Lion Salt Works’ – Chris Hewitson, Cheshire West and Chester Council

12.00: ‘The Chemical Industry in Cheshire’ - Peter Bone, MRIAS

12.30: ‘Wallsuches Bleach Works: A Typesite for Textile Finishing’ Michael Nevell, CBA North West & University of Salford

13.00pm to 14.00pm Lunch

14.00: ‘Dyeing and Finishing for the East Midlands Hosiery Industry’ – Mark Sissons, AIA


15.00-15.15: Break, tea & coffee

15.15: ‘Excavating the Clayton Aniline Chemical Works’ – Ian Miller, Oxford Archaeology

15.55: ‘Fustian and Velvet Cutting’ - Roger Holden, MRIAS

16.25: ‘The Salford Sewage Works’ – Craig Brisbane, CBA North West

16.45 Questions & Close
Chester 2014, the AIA 41st Annual Conference

Weekend Programme

Friday 5th September 2014

Breakfast: 8.00
9.30 – 17.00: Seminar – ‘The Archaeology of Chemicals & Textile Finishing’
18.30-19.30: Dinner in the Whites Dining Hall
19.30-20.30: Evening talk by Dr Michel Nevell on ‘The Industrial Archaeology of Cheshire – an overview’, venue: Beswick Building
21.30: AIA ECM

Saturday 6th September (Beswick Building)

Breakfast: 8.00 in the Whites Dining Hall
9.00: Welcome & Introduction (Mark Sissons)
9.15: Jill Collens – ‘An Introduction to the Archaeology of Cheshire’
10.15 to 12.30: Tour A - Walk along Chester Canal from Lead Shot Tower to Chester Wharf (led by Roy Coppock)
Lunch 12.30 to 13.30pm in the Whites Dining Hall
13.30: ‘Andrew Fielding Recreating the Salt Town of Northwich and its Victorian Buildings
15.00 – 15.30: tea and coffee in the Small Hall
15.30: AIA Awards
  • Restoration Grant awards – Mark Sissons
  • AIA Book Award - Barrie Trinder
  • Archaeological Report Awards
  • Peter Neaverson Award for Digital Initiative & Innovation
17.00 to 18.00 Members’ Contributions
  • Mary Mills - Enderby Wharf: Ironbridge of communication
  • Paul Sowan - Interconnectedness at Merstham, Surrey
  • Ian Mitchell - Visiting Signalboxes
  • Mark Watson - Steam Punks, zombies, stalkers and urban explorers
18.30-19.00: Wine reception. Venue: Student Union Bar
19.00 – 21.00: Conference dinner in Whites Dining Room followed by presentation of awards

Sunday 7th September (Beswick Building)

Breakfast: 8.00 in the Whites Dining Hall
09.30-10.00: AIA AGM
10.00 – 10.15: Overseas’ visits report
10.15 – 10.30: The Brighton Conference 2015 update
10.30 – 11.00: tea and coffee in the Small Hall
11.00 – 12.15: **Rolt Memorial Lecture** by Dr Richard Newman, ‘Harbour developments as a precursor for industrialisation: the case of the Ports of Lancaster and Whitehaven’

12.15 – 13.15: **Lunch in the Whites Dining Hall**

13.30 – 17.30: Tours B & C
- Tour B: Birkenhead docks and tramway (led by Roy Forshaw)
- Tour C: National Waterways Museum, Ellesmere Port (led by Paul Sillitoe)

14.00 – 17.30 Tour D:
- Chemical Industry at Widnes - visit to Catalyst, Spike Island and film of Magadi Soda works, Kenya (led by Peter Bone)

18.30 – 19.30 **Dinner in the Whites Dining Hall**

19.45 – 20.45 Evening lecture ‘Fiddlers’ Ferry Power Station’ by Peter Bone. Venue: Beswick Building

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**Chester 2014, the AIA 41st Annual Conference**

**Weekday Programme**

**Monday 8th September 2014**

*Breakfast: 8.00 in the Whites Dining Hall*

9.30 – 17.30: Tours E & F

18.30-19.30: **Dinner in the Whites Dining Hall**


**Tuesday 9th September 2014**

*Breakfast: 8.00 in the Whites Dining Hall*

9.30 – 17.30: Tours G & H

18.15: coach departs for Llay Miners’ Institute, Wrexham

19.00-20.00: **Hotpot Dinner at the Llay Miners’ Institute**

20.00-21.00: Evening lecture by Andrew Fielding on ‘Salt in Cheshire’. Venue: Miners’ Institute, Llay, Wrexham

**Wednesday 10th September 2014**

*Breakfast: 8.00 in the Whites Dining Hall*

9.30 – 17.30: Tours J & K

18.30-19.30: **Dinner in the Whites Dining Hall**
The main conference location for the 41st AIA Annual Conference, Chester 2014. Lectures are in the Beswick Building (No. 17) and refreshments and displays are in the Small Hall (No. 62). Accommodation is in Grosvenor House (No. 80).
Tour A
Chester Station, Lead Works & Canal Basin
Saturday 6th September

Introduction

Site Conditions

Well paved footpaths along the side of the Chester Canal. A little rough in places. Roving bridge at Chester Wharf has stone setts that may be slippery in the wet. Please take care alongside the locks which have steep drops and deep water and after the locks move down to the canal basin.

Cheshire Gazetteer References: 1.8, 4.15, 5.20, 5.21, 5.22, 5.23, 5.24, 6.23

This a two hour tour along the Chester & Ellesmere Canal (begun in 1772 but not completed until 1835) through the city. Beginning at the Chester Steam Mill, on Steam Mill Street, Chester, (CH3 5AN; SJ 413 666) we shall walk along the tow path (uneven in places and crossing several roads) past the Lead Works and then beneath the Roman Walls of the city in a deep rock-cut channel. This will take us past a ropeworks and the Telford-designed canal warehouse before we enter the Tower Wharf (SJ 401 667). This has a working dry dock of c. 1798 and a boat repair yard - and a plaque in memory of L T C Rolt by the roving bridge.

Chester General Station

We view the Station from the front of the original postal sorting office, which received the mail from both the passenger and post office special trains. On your left is the site of the demolished bus depot and the preserved tram track, in use 1900-1930.

The first railway to terminate at Chester was the Chester-Birkenhead Railway opened in September 1840. This was followed in October 1840 by the line from Chester to Crewe and subsequently London. In 1846 a line was built to Ruabon, which eventually became the mainline to London Paddington. In 1848 the Chester Holyhead line had reached Bangor followed in 1849 by a branch line to Mold and its coalfield. 1850 saw the line open from Chester to Warrington. Finally in 1872 a branch line opened from Tattenhall Junction to Whitchurch. From 1840 to 1848 there was a temporary station to the north of the present building.

The present station was built from 1847-48 by the international railway contractor Thomas Brassey and designed by Francis Thompson. It has an Italianate style using purplish Staffordshire brick and pale grey Storeton Stone and was the largest station building in England at the time. It had what were to become normal station facilities; booking offices, waiting rooms and refreshment rooms and in the upper storey the offices of the various railway companies. The left-hand side of the station frontage as you see it today, known as the Mold Wing, has been partially demolished and is the station car park. This was the site of the platform which was used by the Birkenhead to London Paddington trains, which no longer

The Chester Canal and some industrial archaeology sites (numbered) along its route.
operate. Today the Birkenhead and Wirral services are operated by the extended Mersey Rail electric trains.

The station played an important part in the life of the city, for apart from passenger and postal traffic there were parcel and goods trains. By the late 1920s there were 200 passenger trains a day demanding a large platform staff, many housed in Newtown to the north of the station. Also to the north was well designed coalyard in Black Diamond Street. Rail connections existed to the Chester Hydraulic Engineering Works, which moved its head office to London, but continued manufacturing until the 1960s. It produced hydraulic buffers for the railway and a whole range of components for the docks on Merseyside and Manchester.

The railway companies built two hotels opposite the station on City Road. The Queen Hotel, opened in 1860, was for first class passengers and had a painted stone statue of Queen Victoria above the doorway by T M Penson. It was rebuilt after a fire in 1862. On the opposite side of the road is the Queen Commercial Hotel, which has had many changes of name, and was for second class passengers.

The Chester Lead Works

We now cross the canal by footbridge to view the site of the Chester Lead Works under development for housing, shops and offices. The Lead Works was established by Walker, Parker and Company of Masborough near Sheffield in expanding their interests from being one of the country’s major iron manufacturers into the lead industry. They developed lead works in London, Newcastle, Sheffield, Glasgow and Bristol. The Chester Factory was built in 1800 on a greenfield site alongside the canal enabling them to transport Flintshire lead via the River Dee. Here they manufactured lead sheet, silver, white lead and red lead. It had a shot tower, white lead stacks, a paint mill and red lead-ovens. Today all that remains is the Shot Tower as an architectural feature of a prestigious development. Walkers bought the 1783 patent for the shot tower from William Watts of Bristol. This involves dropping molten lead 150 feet through a sieve treated with a special bedding into a bath of water. The result is a series of perfect spheres produced quickly and very cheaply compared with the cast metal process.

The Steam Mill

We now proceed up City Road to the Canal Bridge built in 1866, where we descend to this 1775 wide boat canal to the Steam Mill. The building you see alongside the canal was built over the original mill, which was the first steam-driven commercial flour mill using Boulton and Watt’s rotative engine in 1786 and predates the often-quoted Albion Flour Mills in London by three months. The mill has been converted into residential use and was subjected to a full archaeological survey and excavation by Pat Frost of Castlerig Archaeology. It also contains research into the Boulton and Watt Archive by Chris Hodrien. We have a full set of plans for this eighth sun and planet type of rotative engine for Walker and Ley from February 1785. The excavation also revealed the foundations of the much older original engine house, which tie up with the Boulton and Watt Plans. In particular, a pit was found which formed part of the steam con-
denser system. Samuel Walker and his partners were prominent business men in Chester and saw the opportunity of using new technology on a greenfield site alongside this ten year old canal. Unfortunately, they did not make a profit and sold out to J A & J Frost in 1819, who built the present building alongside the canal in the 1820s. The Frost family came to Chester in 1818 and took over the Dee Mills, which were destroyed by fire in 1819 prompting a move to the steam mill. They developed the site and replaced the original steam engine in 1827. The Frost family continued to expand the use of the site until 1938 when it passed to the seed merchant David Miln.

Canal Towpath

We return along the canal for a fairly long walk passing former warehouses and the site of an early cotton mill (the Mill Hotel) until we reach the Northgate staircase locks. The canal at this point passes through a cutting dug in the sandstone below the Roman ditch and above us are the remains of some of the Roman walls of the largest legionary fortress in Britain.

The Northgate was rebuilt in 1810 to a design by Thomas Harrison replacing the Mediaeval gateway, which was also the prison and above you is the Bridge of Sighs used to access the prison chapel.

The Northgate locks were originally 5 locks down to the Dee built in 1772-75, but were replaced with the current three-lock flight with a rise and fall of more than 10m when the lower basin next to the Dee was built. The Chester Canal linked Chester to Nantwich almost paralleling the ancient packhorse salt route known as Watkins Pavement. This was not a great success mainly because it did not have a reliable water supply. Another canal was proposed to join Ellesmere with Chester and so transport farm and quarry products to Chester and Liverpool. A direct route via Ruabon had to be abandoned for geological reasons. A solution was found to suit both companies when they combined to form the Ellesmere and Chester Canal Company diverting the Ellesmere section to Nantwich via Whitchurch and using water fed from the Dee at Llangollen. At the same time they built an extension to Netherpool on the River Mersey (now Ellesmere Port). This meant that farm products, slates and salt had easy access to Liverpool. Passengers could be conveyed to join up with the Mersey Ferries. This hastened the decline of the port of Chester.

Chester built the River Dee tidal canal in the 18th century to improve its access to the Irish Sea and the kind of products imported were wine, linen and timber, while it exported copper plate, salt, cast iron. A fleet of ships carried the best cheese in the world to London (according to the German writer Theodor Fontane). On the canals coal, slate and salt were carried. A growing trade in plants from Chester’s Nursermen went to the estates of bankers and industrialists, who expected to be self sufficient in fruit and vegetable supplies. An example of the port’s decline was the linen trade with Ireland, which after initially expanding after 1736 had died by 1840. The Linen Hall (still a street name) was built in 1780, but ended up a cheese warehouse and has now disappeared.

The Canal Basin

The Canal Basin was developed by the successor company The Shropshire Union Railways and Canal Company in 1846. It required facilities to build and maintain its very large fleet of 525 craft. The boatyard at Chester could handle the wide canal flats that navigated from Chester to Liverpool or Nantwich as well as the narrowboats that could use the whole of the inland canal system. The covered dry dock still operates and the slipways are still in use. In 1921 the Shropshire Union sold off its fleet and the boatyard passed on to Taylors a legend beyond their lifetime.
They built and maintained the wooden passenger launches on the River Dee and many of the distinctive Dee Salmon Craft, one of which was specially built for the Grosvenor Museum as an exhibit. They were registered to carry out repairs on RNLI lifeboats and built all kinds of small craft. Alongside the boatyard is a roving bridge built so that the horse can change sides of the canal without being re-harnessed. On the far side of the basin is the warehouse designed by Telford so that barges can be loaded under cover. Above the warehouse are the Canal Company offices and alongside a company hotel all built around 1790. The lower basin was originally much larger and could accommodate flats waiting to enter the Dee or other craft moored until required. Access to the Dee is very restricted since the road swing bridge over the lock has been replaced with a fixed bridge.

We now go over the roving bridge, passed the plaque to L T C Rolt, and head along the towpath to a point where a path leads off towards the University. You will observe modern housing and student flat developments which tend to be built too close to the canal and the vacant plots are likely to receive the same treatment.

Roy Coppack

The boat yard at Chester Wharf (Site 5.20).

A plan of Chester Wharf in the early 19th century, showing the lower basin (left) which gave access to the River Dee.
Tour B

Birkenhead Docks and Tramway
Sunday 7th September

Introduction

Site Conditions

Well paved pavements along the side of the roads and docks. Open water by the docks. Road traffic.

Reference


Foundation

The establishment in 1817 of a steam ferry service across the River Mersey between Liverpool and Woodside encouraged merchants to build their houses on the more salubrious side of the river at Birkenhead, travelling from there to their offices, warehouses and docks on the Liverpool side. By the 1840s a planned new town was growing and new streets had been laid out, including the handsome Georgian Hamilton Square, which may have been modelled on Edinburgh’s New Town.

The Docks

Dock construction began in 1821 when William Laird purchased land to establish the Birkenhead Ironworks. In time these were to develop into the world famous shipbuilding yards of Cammell Laird & Co. The Laird family were anxious to construct docks at Birkenhead but their schemes were frustrated by vested interests in Liverpool. In 1843 however, the Birkenhead Group proposed the conversion of Wallasey Pool, a creek off the Mersey and opposite Liverpool, into a floating dock and sought the advice of James Meadows Rendel, one of the foremost Victorian civil engineers. He drew up plans which even today are famous in the annals of civil engineering for both the approval and condemnation which they drew from the various interested parties. After fierce opposition the Docks Bill received the Royal Assent and the foundation stone was laid by Sir Philip Eger-
ton on the 23 October 1844. By 1847 the ‘Lord’ Morpeth Dock was completed. To the north of this dock both the LNWR and the GWR built warehouses and stables. In 1872 it was to be remodelled for The Pacific Steam Navigation Company and the lock from the river was blocked. The Mersey Docks & Harbour Board was established by an act of parliament in 1857 to take over the docks on both sides of the river. Following this, with plans put forward by both J B Hartley, the son of the famous Jesse, and G F Lyster (not to be confused with his son, A G Lyster, who later replaced his father) the Great Float, a linear series of linked docks, was opened in 1861. Alfred Dock followed in 1866 with a new river entrance and the old Woodside Basin was converted between 1866 and 1868 into a branch dock with transit sheds for the Mersey Flats. The fleet of sailing barges which plied the estuary, the Mersey Navigation, and the broad canals of the hinterland, were as much a part of the Mersey as the Thames Sailing Barges were of the southern river. On Tower Road in 1863 was built a central hydraulic tower, to the designs of J B Hartley. It was castellated and stone faced, with a brick engine house, and powered all the dock gates and bridges. Another accumulator tower was built at the Alfred Dock river entrance where six lock gates are situated. Ranks, Spillers and Vernon’s all established steam-roller flour mills in the surrounding docks and over the years Birkenhead developed a considerable import trade in cattle and other livestock, requiring a vast lairage to be provided in the 1870s near the ‘Foreign Animals Wharf’. There were pens for cattle, sheep and pigs, reached by an elevated walkway from Wallasey Dock over which the drovers and their charges had to scramble. Slaughter houses, meat stores and chill rooms were adjacent and in 1906 an office block was built with 23 separate dealing-rooms for merchants on two decks. This latter feature, now partly refurbished and in the Business Park, is all that survives of a vast enterprise which once employed thousands of workers.

Woodside Terminal and the Trams

Birkenhead is the historic home of the first street tramway in Europe, an idea from America. It was here on 29 August 1860 that tramcars first ran from Woodside to Birkenhead Park, a service that continued until 1937. The revived Birkenhead Tramway began in 1995. Beginning at the Woodside Terminal on the estuary, which is also the ferry terminal, it runs westwards to the Wirral Transport Museum, housed in former tram sheds. Here there is a broad selection of vintage and classic vehicles, including trams, buses, cars, motorbikes and push bikes. It also includes a 26 feet long model railway layout and a reconstructed 1930s garage scene.

David George
Tour C
National Waterways Museum, Ellesmere Port
Sunday 7th September

Introduction

Site Conditions

The Museum is a well paved visitor attraction (with toilet facilities available). Steps by the canal locks. Open water along the canal basins.

Cheshire Gazetteer References: 5.17, 5.18, 5.19, 5.38.

This tour will explore the canal port of Ellesmere (SJ 405 772), built at the northern end of the Chester and Ellesmere Canal. There is a range of exhibition material on the Bridgewater and Manchester Ship canals as well as a variety of canal boats, including the restoration of one grant-funded by the AIA.

History of the Museum

What is now the National Waterways Museum started life in the pioneering days of Industrial Archaeology as the North West Museum of Inland Navigation. In 1974 a group of volunteers, already with rescued historic craft in tow, took on the task of bringing back life to the old Shropshire Union Canal docks at Ellesmere Port. It was a time of heavy manual labour, extensive building reconstruction and mud, mud, mud. The Toll House was the first building to be opened to the public, surrounded by the boats that formed the core of the collections. In 1982, the next major step came with the opening of the Island Warehouse as a centre for the artefact collections. A waterways archive was also established in the warehouse basement. By the end of the decade, it had outgrown that space, and was moved into a new facility in the Tom Rolt Centre. Elsewhere around the site, other buildings and historic facilities were restored and re-opened in what was now named the Boat Museum. At the same time, the museum became surrounded by new housing and commercial developments, taking advantage of the museum-led regeneration. In common with other industrial and transport museums of similar origins, the museum suffered from a significant downturn in visitors during the 1990s. It struggled to survive, let alone refresh its exhibitions and keep on top of never-ending boat restoration needs. In 2000, the management of the museum was taken on by the newly formed Waterways Trust, together with the waterways museums at Gloucester and Stoke Bruerne. In 2012, the Waterways Trust was merged into the new Canal and River Trust, and the Boat Museum became the National

The Ellesmere Port complex in the 1990s. Grey-shaded structures represented demolished buildings.
Waterways Museum. It is now enjoying a resurgence in visitor numbers and public engagement.

**History of the Site**

Born at the height of canal mania, the Ellesmere Canal scheme was originally intended to connect the rivers Mersey, Dee and Severn. Via a network of rural waterways, the small market town of Ellesmere, Shropshire would be connected to the sea at the small fishing village of Netherpool, on the River Mersey, and via the River Severn, at Shrewsbury. The principal traffics were envisaged to be North Wales’ coal, iron and limestone.

The site was located at the head of a low-lying gap of land, linking Chester with the River Mersey. A reliable river channel could be found here, due to the outlet of the nearby River Gowy helping to scour the shoreline. It was therefore a logical terminus for a canal between Chester and the Mersey. Although the original Ellesmere Canal proposals underwent considerable change, in 1795 the Wirral line of the canal was opened. It connected Chester to what became known as the port for Ellesmere – Ellesmere Port.

This part of the Ellesmere Canal was engineered by William Jessop, assisted by Thomas Telford, who later constructed a tidal basin at the Mersey terminus. The navigation was immediately successful, carrying a wide variety of goods, and passengers. The rest of the canal scheme fared much less well, and in 1813, the Ellesmere Canal Company combined with the also-struggling Chester Canal. There was little change to the port during its first 30 years of operation; high land prices precluded expansion. However, a pier head was created in 1816, to protect the tidal basin. In the same year, a steam packet service was inaugurated across the Mersey, with passenger traffic along the canal and across the river proving highly successful. An inn, bathing huts and archery butts attracted visitors, and there was an attempt to turn the new settlement into a resort, but commercial activities soon dominated. By the mid-1820s, increased goods traffic prompted the canal company to expand the port. Telford was ordered to prepare plans for a warehouse and covered transhipping place, with wharves on different levels to assist loading and unloading of sea going vessels. In 1835, Ellesmere Port was connected to the Midlands via Telford’s Birmingham and Liverpool Junction Canal. In the same year, responding to the canal company’s request, Telford produced his magnificent winged warehouse at Ellesmere Port. The building had four storeys between the upper canal basin and the lower basin, some 5m below. Cargoes were unloaded in the lower basin, from sea-going boats which could float in under a three-arched boat arm. Each arch was more than 13m in span, the largest arched shipping spans in the region. Produce was carted through the build-
Tour D
Chemical Industry at Widnes & Spike Island
Sunday 7th September

Introduction

Site Conditions

Well paved footpaths along the side of the Sankey Canal, though rough in places. The museum is well-paved and has toilet facilities. Open water along the canal basins.

Cheshire Gazetteer References: 4.23 and 5.55

The tour takes in the western end of the Sankey Canal (a coal canal built in the 1750s and the precursor to the Bridgewater Canal) and the Old Dock at West Bank (SJ 515 843). This area developed a significant chemical industry after John Hutchinson built his first factory in 1847 on land between the Sankey Canal and the railway line, making alkali by the Leblanc process. Hence, this area is one of the birth places of the British Chemical Industry. There will be a visit to Catalyst, a science centre and museum devoted to chemistry and the products of chemistry.

Catalyst Museum

The Catalyst is based within an administrative building built for John Hutchinson’s Alkali Works and it overlooks Spike Island, the first site for chemical plant to be established in Widnes in 1847 later known as Hutchinson’s No. 1 Works. The building became the headquarters for William Gossage and Sons which in the late 19th century was one of the world’s largest soap manufacturers. The development of the Catalyst Museum was started by Halton Chemical Industry Museum Project in 1982. It was supported by a number of Chemical Companies, Halton Borough Council and the Manpower Services Commission. By 1986 it had outgrown its original space in the old Town Hall and moved to its current location in the Gossage Building. From 1987 to 1998 Dr Gordon Rintoul was Director of Catalyst and oversaw the development of the museum. A glass lift and observation deck, overlooking the Mersey estuary and Spike Island, was installed in 1989 and the building was extended in 1995 to provide an education centre and further visitor spaces. Catalyst houses a collection of over 35,000 items, including films, photographs and archival material which include the research files of ICI General Chemicals Group. It currently has over 30,000 visitors a year about half of which are children.

Spike Island

Spike Island is an area of land between the Sankey canal and the river Mersey and can claim to be one of the birthplaces of the British Chemical Industry. It is the site of Hutchinson No. 1 Works and was the first significant chemical plant in Widnes (a works is...
shown on early maps but there is no other historical record of that site). John Hutchinson was born in 1825, the son of a Liverpool shipbroker. Hutchinson went to work for Andreas Kurtz who had factories in Liverpool producing Potassium Dichromate, Chrome Yellow (Lead Chromate) and Borax. In 1842 Kurtz took over a Leblanc Alkali Works in St Helens. In 1847 Hutchinson took a lease on land at Spike Island and established his first factory to produce Soda Ash by the Leblanc Process, which uses salt as its raw material. By 1851 he was employing over 100 men and in 1859 he built a second plant. Hutchinson employed both John Brunner and Ludwig Mond; in 1872 they left to set up their own works near Northwich and produced their first soda ash in 1874 by the Ammonia-Soda process. Brunner Mond & Co Ltd went on to become one of the major producers of heavy chemicals. It merged into ICI in 1926; that division was separated off in 1991 and it is now owned by Tata Chemicals Limited. By the 1970s Spike Island had become an area of derelict works, railway sidings and waste dumps. This industrial wilderness was reclaimed as woodland, wetlands and green space between 1975 and 1982. Today it is a green flag winning nature reserve. The parkland still has a reference to the industrial past since it retains some pyrites kilns used in the production of sulphuric acid.

Mersey Locks & Old Dock

On the river bank can be seen the east lock with restored gates, one of a pair of locks where the Sankey Canal joins the River Mersey at Spike Island built in 1833 with later alterations and repairs. The locks control a difference in water level of 3.6m at low tide between canal and river level. Immediately to the east is the Old Dock, a wet dock built in 1833 for vessels of up to 300 tons.
Tour E
Fiddlers’ Ferry Power Station and Anderton Boat Lift
Monday 8th September

Introduction

Site Conditions

Specialist clothing will be provided at the Fiddler’s Ferry power station BUT footware with steel toe caps will need to be brought to the site. There are well paved footpaths along the side of the at Anderton Canal. The visitor centre is well-paved and has toilet facilities. Open water along the canal basin.

Cheshire Gazetteer References: 4.25, 4.37, 5.54, 5.81.

A behind-the-scenes tour of the coal-fired Fiddlers’ Ferry Power Station (Warrington, WA5 2UT; SJ 545865). Built by the Cleveland Bridge Company it came into full operation in 1973 and is dominated by its eight 114m high cooling towers and its 200m high chimney. In the afternoon we shall visit the Anderton Boat Lift (Lift Lane, Anderton, Northwich, CW9 6FW, SJ 647 753). One of the most impressive industrial monuments in the region. The hydraulic lift, designed by Edwin Clark, lifted coal- and salt-laden barges. It was built between 1872 and 1875 by the Weaver Trustees to link the Weaver Navigation and the Trent & Mersey Canal.

Fiddler’s Ferry Power Station

Fiddlers Ferry Power Station is a 1,989 MW coal/biomass power station located on the north bank of the River Mersey between Widnes and Warrington. It is a prominent landmark in the area with eight 102m (c. 374 ft) cooling towers and a 201m (c. 660ft) main chimney it can be seen from the Pennines over 32km away. The station was built by the Cleveland Bridge Company for the Central Electricity Generating Board and became operational in 1971. One of the eight cooling towers collapsed in high winds in 1984 due to a defect in its concrete wall, but has since been rebuilt. When the electricity industry was privatised in 1990 it was bought by Powergen, and it is currently owned by Scottish and Southern Energy (SSE) which bought it in 2004. The station has four 500MW turbine/generating sets, supplied by English Electric. The boilers were supplied by International Combustion; each day they burn 16,000 tonnes of imported low sulphur bituminous coal, delivered from Liverpool and other ports by train. 195 million litres of cooling water are drawn each day from and returned to the river Mersey. Two of the four generating units can be co-fired on biomass. In 2006 direct
injection burners were installed to increase the efficiency of co-firing and enabling these two units to be 30% fuelled by biomass. The biomass consists of olive pellets, palm kernel expellers, citrus pulp pellets and wood. To comply with the EU Large Combustion Plant Directive, three Flue Gas Desulphurisation plants were installed from 2006-08. Flue gases are reheated to 80°C and passed through an alkaline limestone scrubbing system to remove sulphur dioxide. The outflow contains gypsum which is recovered before the treated effluent is discharged into the River Mersey. This enables the plant to reduce its sulphur dioxide emissions by 70%. If coal fired power plants are to remain in operation after 1st January 2016 they must comply with a new EU Industrial Emissions Directive (2010). This directive requires “Best Available Technology” to be installed to reduce emissions. SSE is currently installing “Selective Catalytic Reduction” at Fiddlers Ferry. This will involve installing three retrofit catalyst towers between the boilers and existing flue gas desulphurisation units. The process is a catalytic reduction of oxides of nitrogen using ammonia over a catalyst on a ceramic carrier. The products of the reaction are elemental nitrogen and water. The catalyst can be either regenerated or sent to landfill. With these technologies and further investment to reduce Carbon Dioxide, it should be possible to extend the economic life of the plant to 2023.

**Anderton Boat Lift**

One the most striking monuments on the British canal network, and an inspiration for the Falkirk Wheel (built 2002) that links the Forth & Clyde Canal and the Union Canals. The first phase was built in 1872-5 by the Weaver Navigation to link the Navigation with the Trent & Mersey Canal on the eastern bank of the Weaver and so increase the transhipment of coal and salt. Designed by Edwin Clark of Clark Stansfield & Clark of Westminster, it operated hydraulically with two wrought-iron caissons working side by side within an iron framework, the iron rams moving vertically. It was capable of lifting boats 15.2m (c. 50ft). Each caisson weighed 240 tons with water and the lift worked by removing water from the lower caisson. The lift was converted to electric drive in a second phase of works in the years 1903 to 1908 which saw the removal of the rams, and the installation of a new framework, pulleys and counterweights. A wrought iron aqueduct 50m (c. 162ft) long connects the top of the lift with the canal to the east. Before 1872 the Navigation and the canal were linked by a tramroad and vertical chutes along the terrace edge. A canal basin was built in a loop of the River Weaver, with warehousing to the east and west. The basin survived until 1896 when a landslide led to its infilling. Some of these features were excavated in the mid-1990s. The brick foundations of the eastern warehouse were revealed which consisted of brick pillars with concrete floors revetted into the valley side. The northern wall of the canal basin was found to have been built from red sandstone blocks. The southern wall of the basin had two phases: a primary wooden phase and a later concrete phase.

**Peter Bone & Michael Nevell**

*The topographical relationship of the Anderton Boat lift (Site 5.81) and the Winnington salt works (4.25) in the Weaver valley.*
Tour F
Liverpool Docks and Warehouses
Monday 8th September

Introduction

Site Conditions

The visit to the Queensway Mersey Tunnel will be restricted to areas not currently under repair and unfortunately the alternative passenger lift will not be available. This will mean that we will have a leisurely walk down 600 steps in total although the maximum per flight is 120 with frequent stops by the tour guide. The visit may not be suitable for those with mobility or severe sight issues. The Old Dock Museum has well paved walkways. There are rails next to the dock. The Maritime Museum is well-paved and has toilet facilities. Open water along the dock basins and by the Light Ship.

Tour F Liverpool Docks and Warehouses
Monday 8th September

Introduction

Site Conditions

The visit to the Queensway Mersey Tunnel will be restricted to areas not currently under repair and unfortunately the alternative passenger lift will not be available. This will mean that we will have a leisurely walk down 600 steps in total although the maximum per flight is 120 with frequent stops by the tour guide. The visit may not be suitable for those with mobility or severe sight issues. The Old Dock Museum has well paved walkways. There are rails next to the dock. The Maritime Museum is well-paved and has toilet facilities. Open water along the dock basins and by the Light Ship.

References


Due to restrictions in numbers for each tour we will be splitting the party into two groups, and alternating the programme. Both will tour The Old Dock, Liverpool’s first wet dock, built in the 1700s and excavated in 2008-9, the Light Ship and the Queensway Mersey Tunnel. At lunchtime there will be a chance to see the new Maritime Museum (Albert Dock, Liverpool, L3 4AQ; SJ 340898) filled with many displays about Liverpool’s role as an international port, including the Liverpool overhead railway, and the lock gates from the Old Dock.

The excavated section of the old Dock now on display below the Liverpool One commercial development.
The Old Dock

Liverpool Old Dock was the world’s first commercial enclosed wet dock and was opened in 1715. Prior to the dock opening shipping had to be moored in the River Mersey or in the Pool sitting on the silt when the tide was out. The Pool gradually silted hindering navigation and discharging and in 1708 the merchants who controlled Liverpool Corporation employed Thomas Steers to find a solution. The mouth of the Pool was reclaimed with quaysides producing and enclosed gated dock. It was now possible to load and unload whatever the state of the tide. This meant that ships could unload in 1.5 days as opposed to 20 – 15 when moored in the tidal pool. The development cost £12,000 and almost bankrupted the Corporation but its success soon made the works profitable and encouraged further dock expansion.

Liverpool’s Central and south docks gradually developed along the waterfront and the Old Dock became isolated and was finally filled in. Between 1828 and 1839 John Foster built a large Custom House which was also the offices of the Mersey Docks and Harbour Board. This building was badly damaged on 3 / 4th May 1941 during the blitz and its shell survived until 1948 when the robust structure was demolished. The site lay vacant until the 1960’s when new council offices and a fire station were erected on the site. These buildings were subsequently demolished in 1999 making the land available for the proposed Liverpool One shopping development. As part of the planning process it was required that part of the dock structure would be exhibited to the public and the remaining dock walls be identified and protected from damage by the development substructure.

The excavation was undertaken by Oxford Archaeology North between 2001 and 2008 and some of the quayside walls were exposed down to bedrock. The excavation was also use as part of a Time Team Special programme.

In 2010 a visitor’s centre was created within the dock so that the quayside walls could be seen by the general public. We will be taken under cover on a guided tour below the Liverpool One structure to see the 3.7 metre high dock walls which have survived.

The Queensway Mersey Tunnel

Merseyside has four tunnels linking Liverpool with the Wirral. The first tunnel was The Mersey Railway Tunnel which started construction in 1879 and was completed in 1885.

The Queensway Mersey Tunnel was the second opened in 1934 linking Liverpool with Birkenhead. Its original intention was to help with the transporta-
Tour G
Alderley Edge Copper Mines &
East Cheshire Textile Mills
Monday 9th September

Introduction

Site Conditions

Specialist equipment will be provided at the mines but stout footwear needs to be brought. In Macclesfield the pavements are uneven and there is traffic at road junctions. The museums are well-paved and have toilet facilities.

Cheshire Gazetteer References: 1.16, 1.21, 2.18 to 2.39, 3.24 to 3.27, 4.2

In the morning a choice of venues: an underground tour of the Roman and Victorian copper mines at Alderley Edge (SJ 861 775) led by the Derbyshire Caving Club. This will involve hard hats and stout boots to investigate the galleries and shafts. Or a visit to the 16th to 19th century water-powered corn mill of the nearby Nether Alderley Mill (SJ 844 763). Recently restored by the National Trust this building has two waterwheels and an 18th century corn drying kiln. In the afternoon we shall visit Macclesfield, Cheshire's largest mill town, where we shall investigate the working museum at Paradise Silk Mill (SJ 918 732) and then tour behind the scenes at Silk Museum (SJ 917 734) which has a fine collection of textile machinery.

Alderley Edge Copper Mines

Extensive surface and subsurface remains spanning the Early Bronze Age to the early 20th century. The principle sites west of Macclesfield Road are West Mine and Wood Mine; and east of the road Pillar Mine and Doc Mine near Stormy Point where there are entrances into the mines visible; Church Quarry behind the Wizard Pub with a stone built powder house, the remains of firing channels on the quarry walls and a short gallery that is accessible from the quarry; and Engine Vein Mine, where there are four capped shafts and two adit entrance from a long cleft in the rock. The remains of Early Bronze Age pits line the rock face and are visible as curved areas with pecking marks. This mine contains the remnants of a Roman-period gallery and vertical, square-section, mine shaft, the top of which contained a coinhoard deposited around 337 AD. Documented working from the 1690s to 1919. Macclesfield silk mill owner Charles Roe (who also had a copper works in the town) operated on the Edge from 1755 until 1771 probably around Engine Vein before transferring his interest to Parys Mountain on Anglesey, North Wales. James Mitchell and the Alderley Edge Mining Company exploited West and Wood Mines between 1857 and 1878. The peak output was 15,000 tons of copper per annum. In the early 20th century working to extract cobalt ore took place around West Mine.

Nether Alderley Cornmill

Nether Alderley Mill is a 16th to 19th century property owned by the National Trust. It is a red stone building with a stone flag roof and four dormer windows which sweep down from the ridge almost to the ground. The interior is of framed woodwork all in oak. There are two overshot wheels, one above the other, and apart from repairs the machinery is of the period 1850 – 1870. The same water feeds one wheel

The Roman mine shaft at Alderley Edge (Site 4.2).

Nether Alderley corn mill (Site 1.16) looking north at the kiln and milling structures.
and then along a trough to the other. Both wheels are connected by gearing to drive the same two pairs of stones. The mill was bequeathed to the National Trust in 1950, and much restoration work was carried out by the late Dr Cyril Boucher and his son. The mill pool is also the moat to Alderley Old Hall. Looking at the internal arrangements, the upper wheel is an overshot of 3.96m by 1.21m (13ft x 4ft) mounted on an iron axle with wooden arms and an iron rim. This wheel has wooden buckets and the lower wheel is of similar construction 3.66m by 0.91m (12ft x 3ft) except that the axle is of wood. The hurst frame is of mid-19th century construction and is of iron. Chutes feed the stones from the granary floor. Two spouts from the stones feed into a wooden box with a screw device to pass the flour to the sacks. A drying kiln partially survives but the former shed for an auxiliary engine has been lost.

Macclesfield Mills

Eastern Cheshire was one of the chief centres of hand and factory silk production in England from the late 17th to the mid-20th centuries. Silk-covered buttons were manufactured in Macclesfield from the mid-16th century and in Congleton by the 17th century. The big change in production came with the establishment of mechanised silk throwing techniques. 101 mill sites were built in Macclesfield built between 1743 and 1940, and by 1830 nearly half the town’s working population were working in the textile industry. The history of the silk industry in Macclesfield is displayed on three sites. On Roe Street is the Silk Heritage Centre, originally built as a Sunday school in 1814. This houses a gallery of silk costumes, a display of pattern books, a survey of the Silk mills and garrets of the town, and a silk merchant’s shop. Paradise Museum was established as a working museum in 1984 on the top floor of Lower Paradise Mill, part of a complex of silk mills built between 1820 and 1860. The firm of Cartwright and Sheldon specialised in high-quality 0.71m (28 inch) width Jacquard tie fabric. The set up of the looms in the early 21st century reflects the products being woven at the time of the firm’s closure in 1981. There are 24 Jacquard handlooms. The majority of these looms have been restored and are used to demonstrate the intricate weaving techniques. There is also a mill manager’s office fitted-out with period exhibits. The Silk Museum is housed in the old school of art building and exhibits the processes of silk production including throwing, reeling and weaving. There is an extensive collection of silk machinery.

Michael Nevell & David George

The Macclesfield industrial suburb of Waters Green c. 1810 showing mills and a dyehouse..
Tour H

Mineral Mining Production in North East Wales
Tuesday 9th September

Introduction

Site Conditions

Rough and paved footpaths. Steps in many places. Likely to be slippy under foot due to vegetation.

References


An exploration of the mineral and extraction landscape to the west of Wrexham, along the River Clywedog and Gwenfro. This landscape includes the Bersham iron works (SJ 308493); Brymbo iron works (SJ 295534) also founded by John Wilkinson and greatly expanded in the mid-19th century; and the Minera lead mines (SJ 277 509). This was the centre of the north-east Wales metal industries. The main areas of iron and steel working were to the West of Wrexham and south to Ruabon. The leaders of the industry until 1815, were the Wilkinson family.

Bersham Iron Works

The works later made famous by Wilkinson were found by Charles Lloyd in 1718. In 1721 a Bursham Furnace successfully smelted iron by burning coke as a fuel. The lease to the old Bersham ironworks was taken over by Isaac Wilkinson in 1753, said to be 'one of the cradles of the coke-smelting process'. He was attracted to the site by the resources it offered in water-power, as well as in coal and ironstone. The works were adapted to the casting of all manner of iron goods, from box-heaters to water pipes and cannon. Later forges and mills for slitting, rolling and stamping were set up here. The ironworks were inherited by his sons John and William who founded the new Bersham Company. Wilkinson's boring machine, patented in 1774, initially to bore cannon, was modified to bore cylinders for James Watts new im-
proved steam engine. For the next 20 years most of the cylinders for the Boultion and Watt engines were made by Wilkinson at Bersham. By the 1790s the works were at its height and extended roughly a third of the mile along the valley and employed hundreds of workers. In 1803 the owners of a wire mill here were advertising for ‘a good hand who has been accustomed to puddle pig and scrap iron’. The decline of the works in the early 1800s appears to have stemmed from the purchase of the Brymbo estate in 1793 where it was intended to found a steel works. Many of the works’ buildings were demolished by Wilkinson. Other buildings on the western part of the works lasted until the 1960s. The only part of the great ironworks still surviving are the former iron works buildings which were used for agricultural purposes and were purchased by Clywd County Council in 1988. Here excavations by the CPAT revealed other substantial archaeology remains. These include a blast furnace and coking ovens, many artefacts and tools. The farm buildings were developed as a Museum devoted to 18th century iron making known as the Bursham Industrial Heritage Centre.

**Brymbo Iron Works**

Brymbo Hall estate was bought by Wilkinson in 1792 and within a few years he had built two blast-furnaces and an improved boring mill. He also sunk shafts for coal throughout the estate. The works was taken over by a joint-stock company the chief shareholders and sole proprietors were the Darbys and the Robinsons of Coalbrookdale who manufactured iron rails and locomotive boilers there. There were coal mines around Brymbo, where by 1829 there were 41

**No. 1 furnace at Brymbo.**

The lead mining area of north East Wales can be defined as extending from the northern extremity of Flintshire in the neighbourhood of Prestatyn and Dyserth, through Whitford, Holywell and Halkin Mountain to Mold, and over the Denbighshire border into Llanarmon, Llanferres and Minera. Lead mining in the area goes back to at least 1296. In 1761 the mines at Minera were leased out by Chester Corporation, which it held on trust. 10,000 tones, of ore were raised during the next twenty years, which were sent to Hawarden for smelting. There was also lead smelting on the site. The mines closed due to problems with drainage. They were restarted in 1845 when John Taylor & Sons, mining agents from Flintshire, formed the Minera Mining Company. It built a stationary Cornish beam engine on site to pump water from the mines. The company also dug and blasted a network of leading from the mines, to the local valley for extra drainage. It was a profitable enterprise: although John Taylor & Sons invested £30,000 of capital, the profits for 1864 alone were £60,000. By 1900, the price of lead and zinc had fallen dramatically, while the price of coal used for the steam engine rose., leading to mining ceasing in 1909. The site was sold with all its assets in 1914. The site and valley have been extensively landscaped since 1988, and a visitor centre developed by the engine house.

**Minera Lead Mines**

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**Neil Davies**
Tour J
Poynton Coal Mining Landscape
Wednesday 10th September

Introduction

Site Conditions

Gravel and earth footpaths along the line of the colliery tramways. These cross main roads at several points. Open water along the Macclesfield Canal. The Museum is well-paved and has toilet facilities.

Cheshire Gazetteer References: 4.8, 4.9, 4.10, 4.11, 4.12, 4.13, 6.46

In the morning a tour of the surviving coal remains around the village including a winding engine house, the remains of a pumping engine house and the coal wharf on the Macclesfield Canal. In the afternoon lunch and a tour of the Anson Engine Museum (Anson Rd, Poynton, Cheshire, SK12 ITD; SJ 940 835), on the site of the Anson Pit, looking at the engines, their restoration and museum archives.

Poynton Coal

The village of Poynton is situated over the coal measures that run south-east of Manchester towards Macclesfield and the north Staffordshire coalfield. A fault known as the Red Rock Fault runs north to south along the western edge of the Pennines with a westerly down-through of c. 183m. West of this fault the coal lies below 610m in depth and consequently no mining took place in this area. East of the fault there are eleven main seams varying in thickness from 0.45m to 1.83m. This forms an extension of the Lancashire coal field, which was exploited between Poynton and Macclesfield from the late 16th century to the 1930s. The earliest known reference to coal mining in eastern Cheshire is a lease of 1589. Bell-pits are common in the hills east of Macclesfield and Poynton. The advent of the steam, or more correctly, atmospheric pumping engine in the 18th century provided the technology to enable deep pits to be sunk. The best surviving coal remains can be found around the village of Poynton, which in the early 19th century was developed by the local landowners, the Warren family (later known as the Vernons). 74 pits are recorded in this area in the mid-19th century though the last closed in 1935. This coal-mining landscape includes winding engine houses (at Lady Pit, Longchimney and Norbury, just over the border in Stockport), miners’ cottages, and the transport infras-
joined the Marple and Macclesfield Railway (opened in 1864) near Nelson Pit. Now preserved as a footpath for part of its length.

**Surviving Engine Houses**

There are several surviving colliery engine houses in the Poynton area. The Lady Pit pumping engine house on Park Lane is a two storey, brick-built, structure built in 1875. It was equipped with Big Ned, a Cornish pumping engine which operated from 1875 until the pit closed in 1935. East of the Macclesfield Canal in the Pennine foothills is Longchimney (also known as reform Pit but now called Hilltop Cottage). This is a two-storey brick and stone mid-19th century colliery pumping engine house. On the northern side of the brook and railway line, on Norbury Hollow Road, is an early 19th century brick-built pumping engine house for Norbury Colliery.

**Miners’ Cottages**

There are several dozen miners’ cottages surviving in the village, built by the Warren family. There is a large group on Park Lane but the earliest are a row of sixteen two-storey brick-built cottages with stone sills and lintels, front gardens and rear yards, called Petre Bank on Middlewood Road. The central pedimented range has a dated stone that reads ‘1815’. The local dialect name ‘Petre Bank’ means ‘Pear Tree Bank’, and the bank referred to a sand bank behind and to the north of the cottages.

**Anson Engine Museum**

Built on the site of the Anson Pit, this is a voluntary-run museum housing a fine collection of over 250 stationary gas, oil and steam engines from across Britain. It also holds extensive paper archives of a number of 19th and 20th century engineering companies from North West England. Amongst the displays is a large diorama of the Poynton coalfield. The line of an early 19th century tramway runs through the site.

Michael Nevell
Tour K
Salt Landscapes Tour
Wednesday 10th September

Introduction

Site Conditions

Gravel and earth footpaths on some sites. There are also main roads to cross at several points. Open water along the Trent and Mersey Canal. Nantwich Museum is well-paved and has toilet facilities.

Cheshire Gazetteer References: 4.14, 4.17

A tour looking at more than 200 years of salt making in Cheshire. Firstly, the Nantwich Museum (Nantwich Museum, CW5 5BO; SJ 653 522), where a 16th century salt ship (wooden brine tank) is on display. Then to Middlewich to look at the Murgatroyds’ brine pump. Afterwards, northwards to the Ashton and Neumans Flashes at Northwich, formed by collapses in the river bed of the Weaver due to underground salt extraction. Finally, the Lion Salt Works. Founded in 1842, it is the only surviving open-pan salt works in the UK and recently restored.

Salt in Cheshire

The Cheshire ‘wich’ towns (Northwich, Middlewich and Nantwich) can trace their salt heritage back to before the Roman conquest. Medieval production focused on heating open-pan salt. This used a large, shallow, boiling pan (normally rectangular) over a fire or furnace to evaporate brine and so crystallise the salt. Iron pans and coal-fuel progressively replaced lead, wood, and peat in the 15th to 18th centuries. The pans were made of riveted wrought-iron plates and by the 18th century each container could weigh up to seven tons. Cheshire became dominant in salt making because of its easy access to strong natural brine and rock salt, coupled with good communications. Middlewich and Northwich thrived on the transport advantages from the use of the Weaver Navigation (begun in 1720) and the Trent and Mersey Canal (opened in 1777). Both carried tens of thousands of tons of salt and coal into and out of central Cheshire in the later 18th and 19th centuries. Winsford in the location of the UK’s main rock salt mine. Here, the Meadowbank Mine is the source of the majority of the UK’s de-icing salt for roads. The winding shafts can be seen on either side of the River Weaver, although there is no public access to the mine itself.

Nantwich Museum

Founded in 1980 the museum, now housed in the former public library, contains material on the town’s history, especially its salt heritage. Exhibitions include excavated Roman material from the Roman salt works discovered in the town found at Kingsley Fields in 2002 and medieval and industrial salt making equipment. Of particular significance is the display of a Roman lead salt pan, and a surviving salt ship, a wooden brine tank from the 16th century excavated on Welsh Row in the town in 2004.
Middlewich Brine Pump

Murgatroyd’s Brine Pump Number 1 is a single-storey, brick-built structure housing steam-powered brine pumps. It is the only structure left of the Murgatroyd’s Salt Works. Founded by George Lomas Murgatroyd in 1889, it produced its first salt in December 1890. The brine spring he tapped into was of very high quality, enabling the works to expand and become one of Middlewich’s most important employers. The open-pan salt works continued in production until 1966, brine pumping continuing until 1977 when the site was bought by Congleton Borough Council. It is now owned by Cheshire East Council. The pump house complex comprises the pump house itself (it was rebuilt in the 1930s), well head, three brine pumps, timber gantry, brine header tank, external electrical transfer pumps and transformer pole. It was surveyed archaeologically in 2010 by OAN. The site is a Scheduled Ancient Monument.

Ashton and Neumann’s Flashes

These two flashes are large open area of water south-west of the Lion Salt Works site. They were part of the Platt’s Hill and Dunkirk salt mines owned by Mr Ashton and Mr Neumann and were created by the collapse of salt mines in the Weaver valley. On the 6th December 1880 part of Mr Ashton’s Salt Works collapsed which was filled by water from the neighbouring Wades and Witton brooks. This lead to the loss of several houses occupied by salt workers and the re-routing of the road between Northwich and Warrington. The flooded area was gradually reclaimed by the tipping of lime waste from the local chemical industry.

Lion Salt Works, Marston

This complex is the only surviving open-pan salt works in Cheshire. Founded in 1894 by Henry Ingram Thompson, in an area of large numbers of open-pan works, it closed in 1986. It had four shallow iron pans where brine, pumped from wells on the site, where evaporated by heat from coal-fired furnaces. A pan house, drying room and offices survive. The Trent and Mersey Canal runs along the northern side of the site and the works had its own railway sidings. It has undergone extensive restoration since 2012 and is due to re-open to the public in 2015. Owned and run by Cheshire West & Chester Museums.

Andrew Fielding
The Council for British Archaeology
North West Industrial Archaeology Panel

Introduction

The Council for British Archaeology North West is an independent charity funded by its members’ subscriptions with close ties to its parent body - the Council for British Archaeology. It covers the historic counties of Cheshire and Lancashire plus Greater Manchester and Merseyside. The archaeology of this region is as diverse as its landscape, from the elusive remains of the Iron Age to the iconic monuments of the Industrial Revolution. The Group’s aims are to:

- help advance the study and care of the historic environment of Cheshire, Greater Manchester, Lancashire and Merseyside.
- campaign on behalf of the region’s archaeology and heritage.
- improve public knowledge of the region’s past
- bring together and support individuals, local amateur groups, professional bodies, academics and partners with an interest in the region’s archaeology and heritage.
- and to encourage and publicise opportunities for education, participation and research into the region’s archaeology.

The Group fulfils these roles through bi-annual meetings, e-newsletters, research grants, social media (website, blogging, tweeting), and a journal, as well as working behind the scenes to protect and enhance the region’s historic environment and in particular its archaeology.

The CBA NW Industrial Archaeology Panel

The North West Industrial Archaeology Panel was established in the late 1980s as part of the CBA’s initiative, with the Association for Industrial Archaeology, to promote Industrial Archaeology at a regional level. Its first chair was Tom Clare, from the University of Liverpool, and currently Dr Michael Nevell, University of Salford, is chair. The panel membership is voluntary and comprises a cross-section of those interested in the region’s internationally important Industrial Archaeology: planning archaeologists, local authority conservation officers, museum archaeologists and curators, voluntary society members, academics, professionals and specialists.

The Panel acts as an information exchange within the region and provides specialist support for CBA North West on planning, conservation and research issues within Industrial Archaeology. Since the early 1990s the Panel has regularly held the North West Industrial Archaeology Conference (the Friday seminar is the 20th such conference) and publishes an occasional e-newsletter, *Industrial Archaeology North West* (this publication is the sixth in that series).

Contact Details

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