

# The Sheffield & Tinsley Canal and Victoria Quays

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## Why the Canal is so Interesting

The Sheffield and Tinsley Canal is a short but historically significant waterway with a huge elevation change, requiring intensive engineering. Opened in 1819 during the height of Britain's Industrial Revolution, the canal was built to support the transport of coal, steel, and other goods that fuelled Sheffield's rapid industrial growth.

The canal is 3.9 miles long and between 4ft and 5ft deep. The Canal Basin is between 12ft and 16ft deep. It originally cost £55,000 to build in 1819, which is approximately £4 million in today's money!

The canal includes the impressive Tinsley lock flight. Originally, there were 12 locks, raising boats significantly in elevation. To accommodate a railway bridge in 1959, locks 7 and 8 were combined into a single concrete chamber.

Today, the Sheffield and Tinsley Canal is a revitalised waterway, supporting wildlife and used for leisure activities such as walking, cycling and boating and offering a peaceful glimpse into the region's industrial heritage.

## History of the Canal

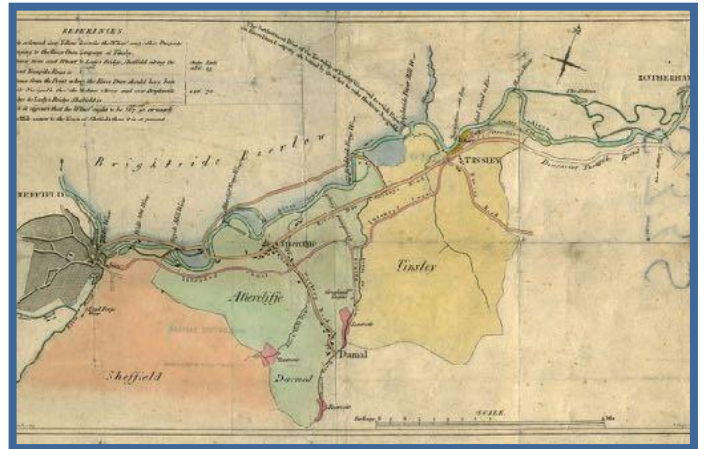
The River Don flows through Sheffield, but historically its upper reaches were not navigable. In medieval times goods produced in Sheffield had to be transported overland to the inland port at Bawtry on the River Idle. This meant that Sheffield, despite being a centre of industry, was effectively a landlocked town.

## Why a Canal Was Needed

For many years, rivers along England's east coast had been improved to allow boats to travel inland and trade with the wider world. However, the River Don only reached the edge of Sheffield. The land between the river and the town was owned by powerful landowners who charged fees on goods coming in and out. Because of this, materials had to be unloaded and carried across their land by horse and cart, making transport slow and costly.

For over a century, these landowners blocked plans to improve the river or build a canal. They were worried that cheaper coal from other areas would harm their own mining businesses and that changes to the water supply would affect the mills they owned.

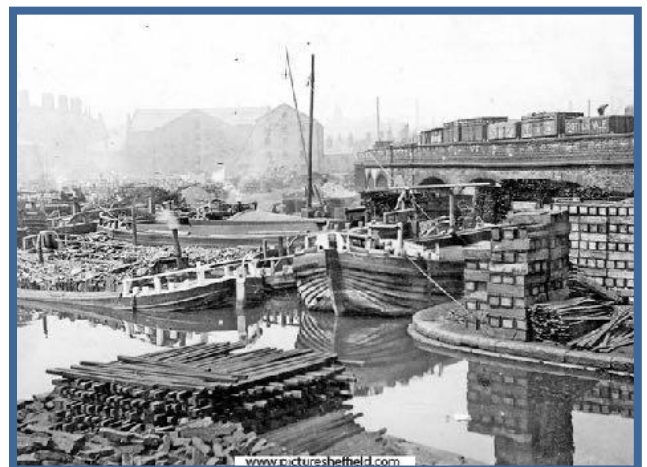
Eventually, local industrialists pushed for change, and in 1815 a canal bill was passed. The Duke of Norfolk agreed to the project but insisted on deciding the canal's route. The new canal linked Sheffield to Tinsley, connecting the city to the wider waterway network. A short branch, about half a mile long, was also built to connect directly to the Duke's coal mine at Darnall.



## The Canal is Built

The canal was completed in 1819. On 22 February that year, a public holiday was declared as more than 60,000 people—almost the entire population of Sheffield—gathered to celebrate the grand opening of the canal basin. The first boat on the canal was called *The Industry*, which inspired the famous work of art further down the canal. For the city, a modern transport system had arrived.

The Sheffield and Tinsley Canal - hand cut by local people - embodies the vision, grit, ingenuity and industrious spirit of the city. Upon its completion, it transformed Sheffield from a landlocked town to an international trading hub, with a global reputation.



Horse drawn keels



## Construction of the Straddle

### The Railways

Trade flourished for about twenty years, but the arrival of the railways soon changed the situation. By the mid-1800s, railways had arrived in Sheffield:

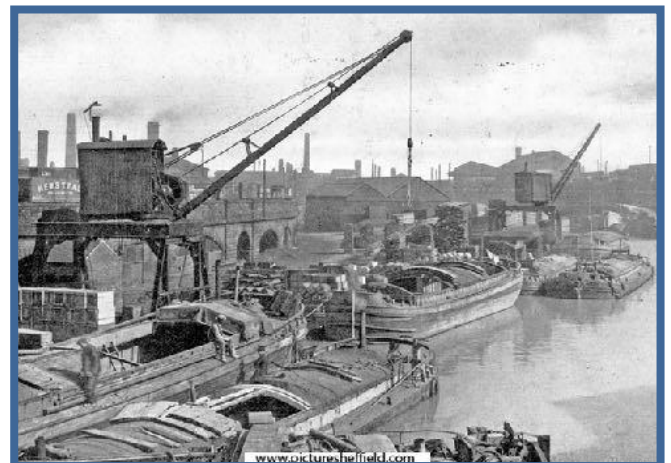
- The first railway reached Sheffield in 1838
- By 1848, the canal was taken over by the Manchester, Sheffield & Lincolnshire Railway
- The nearby Sheffield Victoria railway station opened in 1851

From this point, the canal basin became a rail and water transport hub.

### Impact of the Wars

During the WW1, the Sheffield and Tinsley Canal played a reduced but still important role:

- The canal was taken over by the Government under wartime control
- Maintenance was largely neglected due to the war effort
- Many canal boats and crews were requisitioned for military use abroad
- Trade continued, but at a much lower level than before



When the war ended, the canal was returned to its former management, but many of the boats had been lost during the conflict. There were calls to modernise and even nationalise canals to revive them.

But the damage was done—the canal never fully recovered its former importance. During the interwar years the canal's business declined again as the railways expanded. In the World War II period the canal played only a minor role in the supply chain. During the The Blitz in 1940, the canal was even breached at Tinsley.

## Decline of the Canal

Although commercial traffic continued into the late 1970s, the canal gradually fell into disrepair. Increasing reliance on road transport and the continued dominance of rail freight meant that waterborne trade declined steadily.

Warehouses became underused, industrial buildings fell vacant, and the canal basin area began to deteriorate.

## Regeneration and Renewal

In the late 1980s and early 1990s, redevelopment projects began to revitalise Sheffield's waterways. In 1991 a new marina was built at Don Valley Bowl to support the 1991 World Student Games. New bridges and towpaths were also constructed, while many old industrial buildings along the quays were converted into offices, housing, and leisure facilities.

## Reopening of the Canal

The restoration of the canal was officially marked in 1994, when Prince Charles formally reopened the waterway, marking a new chapter in the history of Sheffield's waterways.



## Victoria Quays - The Canal Basin

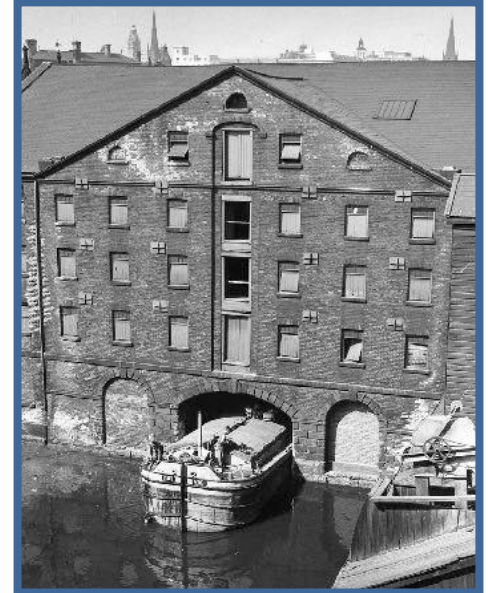
Victoria Quays was known originally as the Canal Basin and served as Sheffield's inland port. Grain was the main cargo, arriving at the basin, along with timber and iron ore. The surrounding area contained many breweries which required large quantities of grain. This demand led to the construction of large grain warehouses around the Quays.

### Terminal Warehouse

The Terminal Warehouse was built at the end of the canal to store grain for the nearby breweries. Boats known as Yorkshire keels could sail directly into the warehouse to unload their cargo, which was then stored on the upper floors.

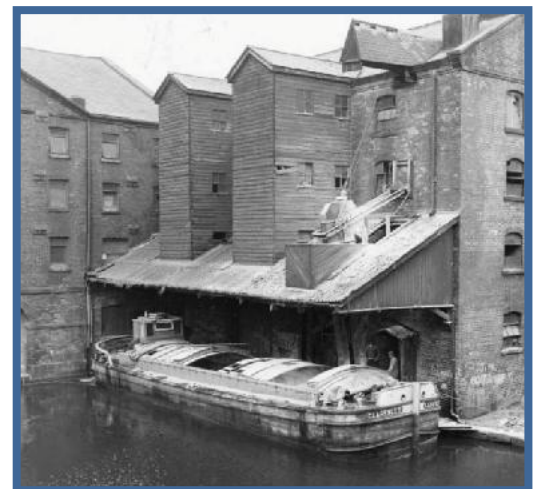
These traditional cargo vessels were approximately 61 feet long and 15 feet wide. On the rivers they were powered by sail, but on the canal they were usually towed.

Sometimes the keel-owning families themselves hauled the boats along the canal. Alternatively, a service known as "horse marines" could be hired — a man and a horse who would tow the vessel along the towpath for a fee.



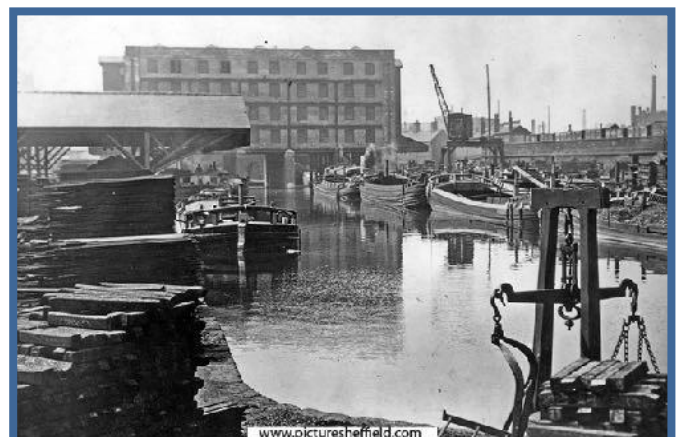
### Grain Warehouse – 1895

As trade increased a second Grain Warehouse was built in 1895. It included a bucket grain elevator used to lift grain from the boats to the upper floors.



### Straddle Warehouse – 1895

The Straddle Warehouse was also constructed in 1895 to provide additional storage and improve movement of goods around the basin. The building was designed to straddle the canal-side route, allowing boats to pass directly underneath it. This connected the Terminal and Grain Warehouses and formed part of a large integrated storage complex.

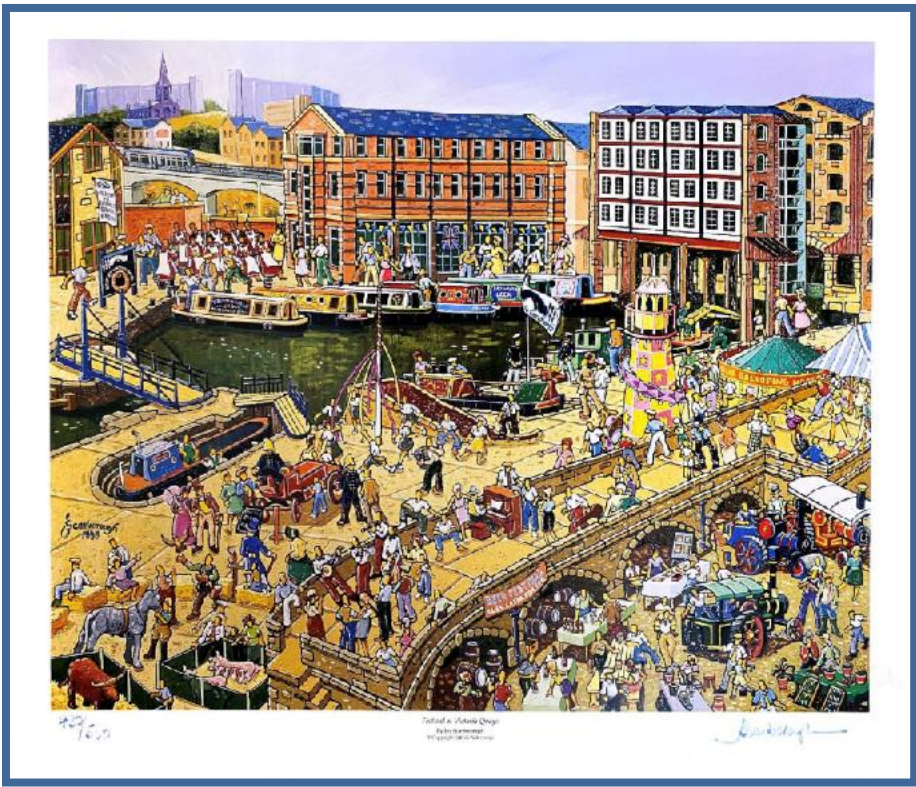


## Other Goods

Timber and iron ore were also brought into the basin and stored in open yards beside the canal.

Coal from nearby collieries was transported by wagonways to an interchange above the basin. The carriages would stop over the arches and drop the coal through the 'coal drops' in the vaults, into the wagons below. These were pushed up and tipped directly onto waiting keels via the 'staithe' or cranes.





### Victoria Quays Today

Many of the historic buildings around the canal basin still survive today. The area has been restored and redeveloped as Victoria Quays, with warehouses converted into offices, apartments and leisure spaces, while preserving Sheffield’s industrial heritage.

### Entering the Quays

As visitors enter the Quays through the main archway they can see an impressive example of skew vaulting in the brickwork above. This method allowed the arches to support the heavy railway and wagon traffic that once ran above them. In total, 22 arches were constructed as part of this structure and are good examples of the craftsmanship of industrial engineering.



### Merchants Crescent

Built in 1865, Merchants Crescent originally consisted of a two-storey row of offices. These offices were designed for the many coal merchants who operated from the nearby Tinsley Park railway yard. From here coal was traded and transported throughout the city using a combination of rail, canal boats and horse-drawn carts.



Opposite Merchants Crescent visitors can see a historic clock that originally belonged to Tinsley Park Colliery.

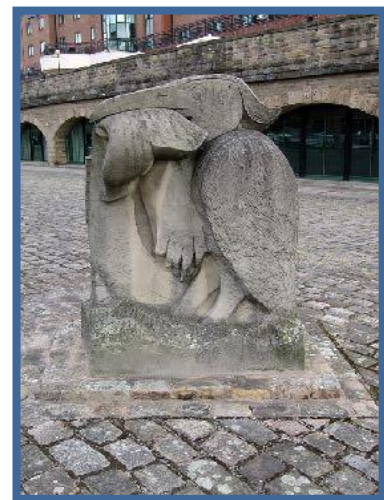


## Public Art

There's lots of artwork along the canal. Near Ethel's Mooring stands the granite sculpture 'Heron and Fish', created in 1995 by the sculptor Vega Bermejo. The artwork was selected by schoolchildren from Sheffield as part of the redevelopment of the Quays and reflects the wildlife now living along the canal.

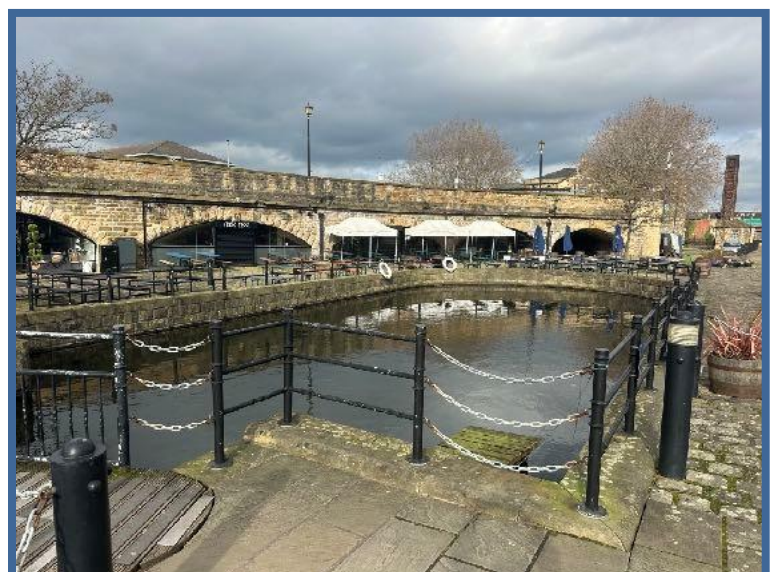
## The Swing Bridge

Visitors leaving the Quays cross a hand-cranked swing bridge. The bridge is unlocked using a key and then turned with a windlass, allowing the bridge deck to swing horizontally on a central pivot so that boats can pass through the canal.



## The Historic Dry Dock

Next to the bridge lies a 200 year-old dry dock which was once used for boat building and repairs. In 1851 a timber yard stood nearby storing hardwoods and softwoods from around the world. The dock was later filled in and forgotten before being rediscovered during redevelopment work in the 1990s and carefully restored.



## Remains of the Wagonway Bridge

At the far end of the basin stand two stone columns decorated today with paintings of a swan and a kingfisher. These columns are the remains of a bridge that once carried a gravity wagonway from nearby collieries to the upper level of the arches, where coal could be tipped directly into carts or canal boats below. An excellent example of a coal drop can be seen in the vault leading to the car park



## The Historic Warehouses

The Terminal Warehouse, Grain Warehouse, and Straddle Warehouse have all been carefully restored. Today they are used as offices and apartments, while still preserving their original industrial character



The Straddle.

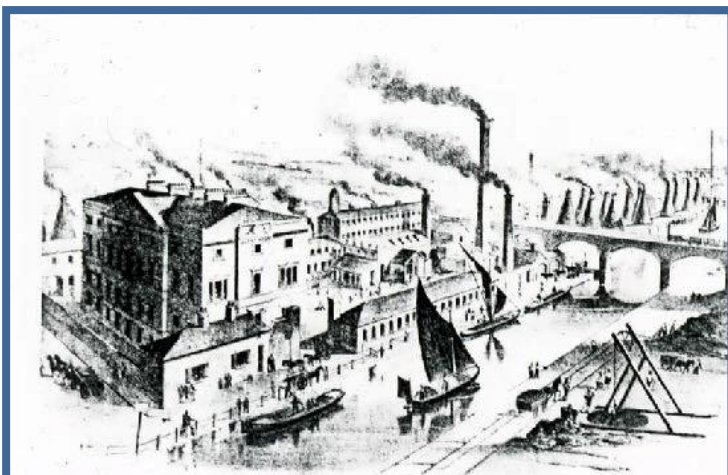
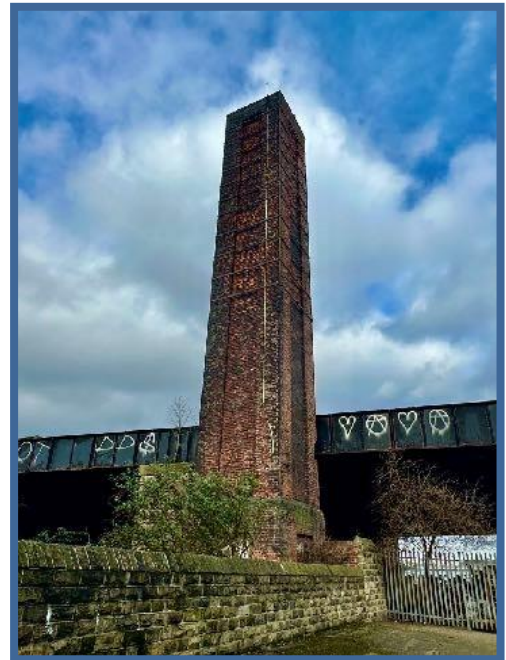


Terminal & Grain Warehouses

## Sheaf Quay

On leaving the Quays, the impressive Sheaf Quay stands on the left-hand side. Built in 1823, the building was designed to resemble a classical country house, reflecting the prosperity of Sheffield's early industrialists.

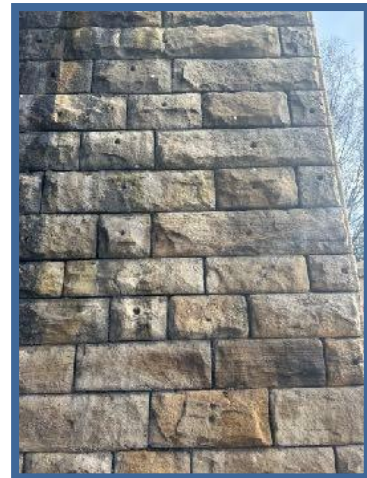
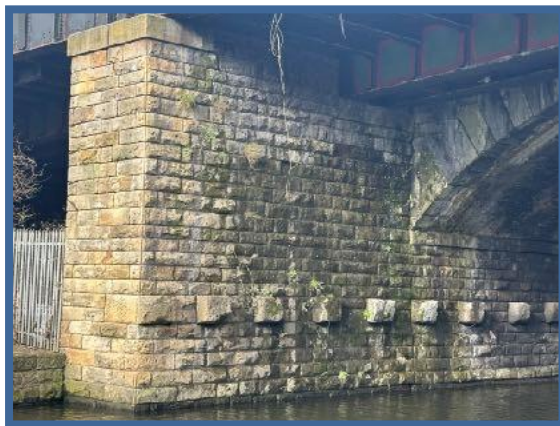
Sheaf Quay formed the central part of the Sheaf Works, the toolmaking factory of William Greaves and Sons. The works were among the first cutlery factories in Sheffield to use steam power, allowing production to increase dramatically and marking an important step in the city's industrial development. Its location beside the Sheffield & Tinsley Canal was crucial. Raw iron and steel could be delivered directly to the factory by boat, while finished knives and tools were transported along the canal to Hull, where they were exported around the world. This made Sheaf Works one of the earliest places in Sheffield where raw materials arrived and finished goods left from the same site. Before factories like Sheaf Works were built, most cutlery in Sheffield was produced by "little mesters" – independent craftsmen working in small workshops. The Greaves factory represented a new model of manufacturing, bringing many stages of production together in a single location. The site later passed to Thomas Turttons and subsequently Mappins.



The small building by Sheaf Quays is the old 'hiring-on' office where casual labourers queued for a days work. In front of it is the remains of the weigh bridge.

### Leaving the Quays

As we leave the quays we go under two bridges, one railway and one road. Take a look at the holes in every stone, made by callipers used to lift the stones in place. Also note the row of stones sticking out which were probably used in the construction of the arch by holding up a wooden support frame.



### Boat Yard

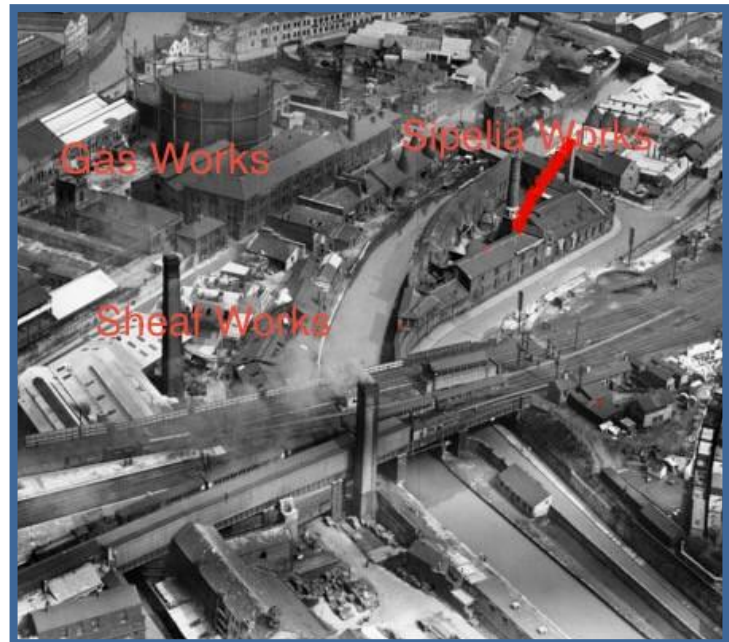
The boat yard on the left fills the land that was once all part of Sheaf Works, with its many blast furnaces. Behind it, was the old Sheffield Gaslight Company, later Sheffield Gas Works.

### Sipelia Works

On the opposite side, by the towpath is the former Sipelia Works, part of Sheaf Works, which now houses the charity, Emmaus. When Wm Greaves closed in 1850 the cutlery line was taken over by Eyre Ward & Co. who built Sipelia Works a hundred yards or so away on the opposite bank of the canal. In the 1930's the works were acquired by the Sipel brothers (hence its present name).



The Sipels were German Jewish cutlers who escaped persecution in their home country. This family firm, which was headed by the daughter of one of the original brothers following their retirement, continued to trade until the mid 1970s.



View from the air 1948

## Cadman Bridge

Cadman Bridge is known as the 'Oblique Bridge' because of its unusual angle across the canal. Built in 1819, it's one of only two surviving bridges from the original set of fifteen along this stretch of canal.



The grooves worn into the corner stones were the result of years of friction from rope haulage. Horses walking along the towpath pulled heavily loaded keels (boats) which rubbed repeatedly against the stone, gradually carving those grooves over time.



Just before the bridge, the pile of old grindstones tells another story. These were once used to sharpen blades and tools and when worn out, they were used as fill material.



## Parker's Wharf

Parker's Wharf, just beyond the bridge, was built in the 1840s by Samuel Parker, importer of horn and ivory for handles in the cutlery and penknife industry. All along this stretch of the former industrial section of the canal, the banks show evidence of wharves and moorings and is rich in evidence of the period and its trades.



## AleChemist

Keep an eye out for some of the canal's more unusual and easily overlooked features.

Near one of the playful signposts pointing "this way" or "that way," you may spot a few skeleton figures quietly watching over the waterside.

If you look even closer between the beer barrels, you'll discover a small stone statue of a boy cheekily "watering" the canal below.



This site was formerly Samuel Smith's Grain Elevator which was sadly demolished in 1989.



## Council Incinerator

On the opposite side, towering above us is the Sheffield City Council's Bernard Rd Incinerator.

It is notable as it not only provides electricity from the combustion of waste but also supplies heat to a local district heating scheme, making it one of the most advanced, energy efficient incineration plants in the UK.



## Meggitt's Bone Mill

The near derelict red brick building on the left with the arched windows was once Meggitt's Bone Crushing Mill. Samuel Meggitt started his business as a bone merchant and button manufacturer in 1837 and had been based at Duke Street but moved to this site in c1856. They cut bone for cutlery handles, made buttons from the off cuts, ground bone to mix with imported guano for fertiliser and lately made glue. The company finally closed in 1951. This listed building now belongs to Bedford Steels.

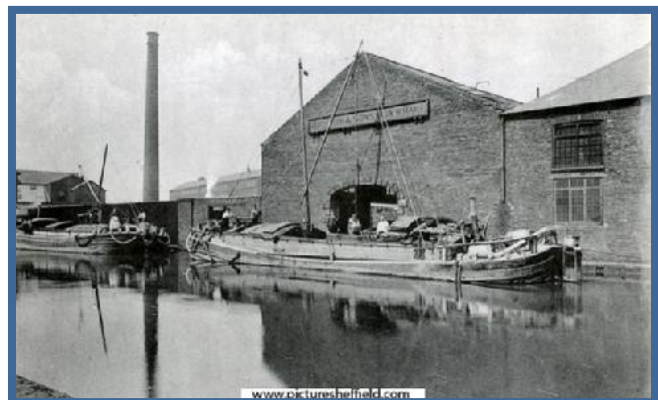


## Hot Rolling Mill

On the opposite bank is Bedford Steel's hot rolling mill, producing hollow mining drill steel. If you look carefully you can see the red hot rods in production inside. After the building is the remains of an inlet from the canal, this allowed cargoes to be unloaded and transported to the Park Iron Works on the other side of Effingham Rd by way of a tunnel.

## Firth's Iron Wharf

The Firth Iron Warehouse (also known as Iron Wharf) is a 19th-century Grade II-listed building used by Thomas Firth & Sons to store and unload Swedish bar iron. Keels unloaded the iron which was then distributed via horse and cart to furnaces on Saville St. It is noted as the last surviving example of its type in Sheffield.



## Nunnery Colliery Pipe Outlet

This is the pipe outlet from the Nunnery colliery which had the dual purpose of disposing of the waters pumped up from the coal face and also topping up the level of the canal. The water was of course heavily polluted and poisonous in those times. There are several mooring rings sited on the wall where keels moored to load coal from the colliery, brought down on their own railway system.



## Wildlife and Pollution

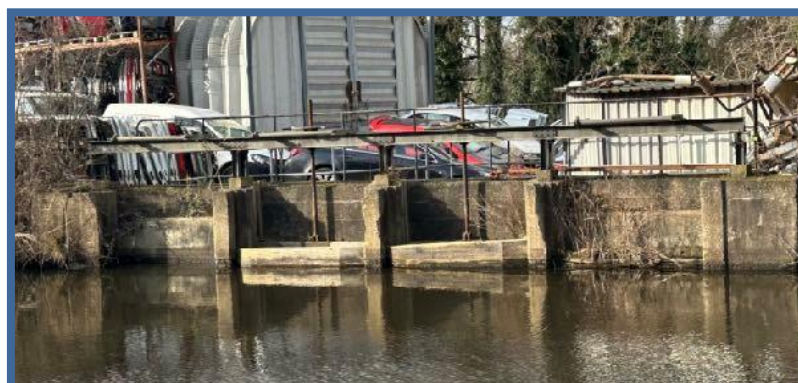
The Canal was effectively a standing body of water in many sections, with very little natural flow and so became heavily contaminated. During the 19th century, the Canal was heavily polluted, becoming functionally "dead" by the late Victorian era due to sewage dumping, industrial waste and urban runoff.

Today we have an abundance of wildlife on the Canal including bats, foxes, voles, snakes, butterflies. You can see swans, Canada geese, Chinese geese, ducks, moorhens, kingfishers plus many species of birds and a variety of dragonflies and damselflies. There are also two terrapins which make an appearance on sunny days.



## Sluice Gate

Here the Canal runs along a 10-foot-high wall. Sluice gates were installed to allow water to be drained into the nearby River Don in the event of a breach or leak. Conversely, during periods of hot weather or in exceptional circumstances, if the pumping system were to fail, water could be pumped in reverse—from the River Don back up into the canal—to maintain water levels.



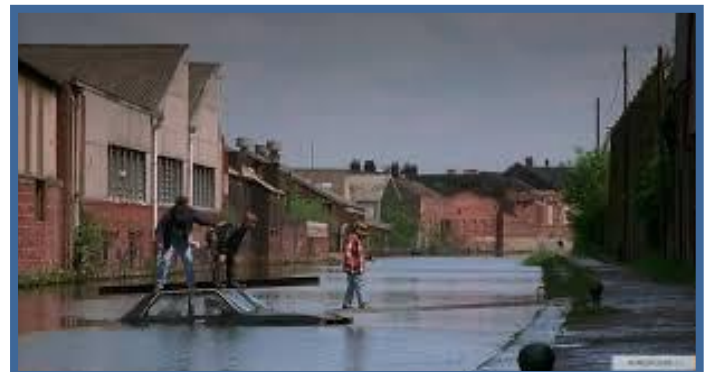
## Bacon Lane Bridge - The Needle's Eye

Bacon Lane Bridge is a Grade II listed structure, one of the two remaining original bridges on the Canal, built in 1819. Its nickname, "The Needle's Eye," comes from the extremely tight navigation, particularly in high water conditions or when boats are lightly loaded, making passage difficult. If you look carefully at the underside on the towpath side, the stone has been worn away over time by the backs of horses as they passed through, gradually eroding the surface.

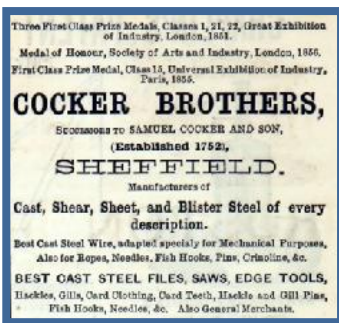


## The Full Monty

The Sheffield Canal is probably most famous for its part in The Full Monty. The iconic, car-in-the-canal scene was filmed on this stretch in 1996. At the time, this part of Sheffield was far more heavily industrialised; since then, much of the surrounding area has been demolished and is now undergoing regeneration.



Certain parts of these historic buildings have preservation orders on them. This was part of the Fitzalan Works, founded in 1839 by the Steelmakers Marriot & Atkinson then taken over in the 1890's by the Cocker Brothers.



### Chippingham Basin

Chippingham Basin is a historic widened section of the Canal. Years ago it was a very popular place for locals to swim and fish. During construction of the Sheffield Supertram in the 1990s parts of the canal were altered and reinforced. New banking and structural work were added to stabilise the area alongside the tram route.



1970's



1980

## Attercliffe Station

As we pass under Shirland Lane Bridge, the brick construction on the left hand side, is all that remains of Attercliffe station. Opened in 1871 and closed in 1927, little remains today besides a bricked-up arch from a subway that connected the two platforms.

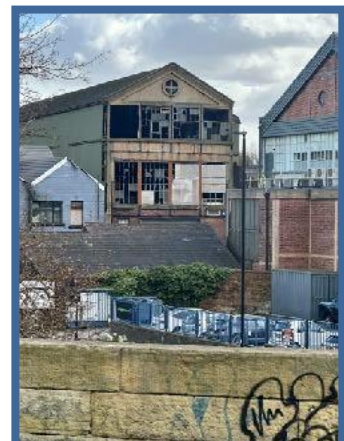


## 'Ackerdoc

The Worksop Road Aqueduct, known locally as the 'Ackerdoc, located in Darnall, stands as a remarkable historical landmark and an impressive feat of 19th-century engineering. Built in 1812, this aqueduct is celebrated for its unique design, featuring a central passage for vehicular traffic flanked by two dedicated tunnels for pedestrians.



Shortly after you pass under the Worksop Road Aqueduct, on your right you'll see the derelict factory where the Full Monty lads rehearsed.



## Don Valley Moorings

The Don Valley Stadium Moorings were purpose-built around 1990–1991 alongside the Don Valley Stadium for the 1991 World Student Games. They were part of a bold, short-lived vision for a revived Don Valley during the Universiade era. Following the stadium's closure and demolition in 2013–2014, the moorings fell out of regular use.



## Brown Bayley Bridge

This attractive new footbridge was built in 1993 as a tribute to the former steel works. Brown Bayley Steels was a steel-making company established in Sheffield in 1871, as Brown, Bayley & Dixon. They occupied the site which is currently the Don Valley Bowl.



## Pot House Bridge



This bridge is named Pot House Bridge after the previous name of the Lane which housed the Attercliffe Common Pottery.

## Sheffield Arena

Opened by H.M. The Queen at 11am on Thursday 30th May 1991 as a venue for the World Student Games, it now plays host to Ice Hockey, Ice spectacular and pop concerts.



## Broughton Lane Bridge

At this key junction where Tinsley Park Road, Greenland Road and Broughton Lane converge beside the canal towpath, the site marks the former entrance to the historic Greenland Arm. This short canal branch once extended for approximately 700 metres along what is now Greenland Road. It was constructed at the insistence of the Duke of Norfolk, whose support for the wider canal project depended on a direct link to serve his local mining operations. The arm played an important role in the area's industrial past, facilitating the transport of coal and materials. However, by the early 20th century it had fallen out of use and was subsequently filled in, allowing for the expansion and realignment of Greenland Road.



This is believed to be the joining point of the Greenland Arm

## Valley Entertainment

On the far side of Broughton Lane Bridge lies Valley Centertainment, now a major hub for leisure and entertainment. When it first opened, the complex featured what was then the largest cinema in Europe, originally known as the Virgin Megaplex. The development was a flagship of entrepreneur Richard Branson, who was so invested in its success that he funded the construction of a dedicated stop on the Sheffield Supertram to improve access for visitors.



## Peacock Bridge

Just before the first lock, traces of the historic Peacock Bridge can still be identified. This bridge once carried coal wagons over the canal from the nearby Tinsley Park collieries, linking the pit head and coke kilns to the sidings at Broughton Lane station. Originally constructed as a wooden railway bridge, it formed a vital part of the Duke of Norfolk's transport network, enabling coal to be efficiently moved across the site. The canal itself narrows here into what was once a loading pit, where materials were transferred, and alongside it lie the remains of the bridge structure, although only fragments survive today.

It is also the favourite sunbathing spot of one of our resident terrapins, who likes nothing better on a sunny day, then to stretch out on his favourite grass covered stone and soaks up the rays.



## Outlet Pipe

Just before the first lock is the discharge pipe in the summit pound. Water is pumped up electronically from the River Don to prevent the canal from drying out.



## Water Supply and Engineering

Two million litres of water are pumped approximately one mile and 93 feet vertically from the River Don into the canal every day.

Historically, maintaining water supply was a major expense. Pumping water cost about 5 shillings and 10 pence per lockful.

The pumping system originally used a steam engine. In 1918, this was replaced with 125 horsepower diesel engines. Today it is run by electricity.

The pumps deliver approximately 3,500 gallons per minute (265 litres per second) to the top of the lock flight.

Additional water was also sourced from the Nunnery Colliery workings.

The Sheffield and Tinsley Canal remains an important example of industrial-era engineering, particularly due to its reliance on pumped water and steep lock system.



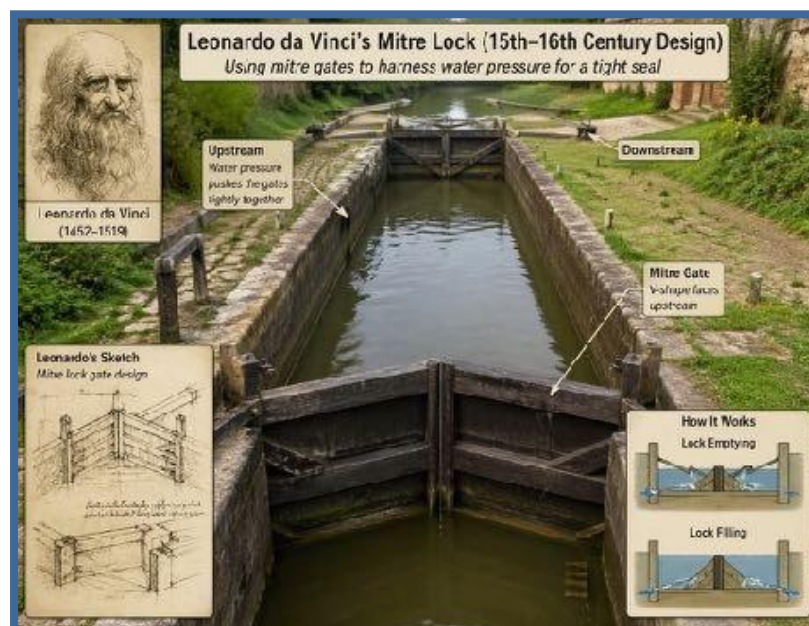
## The Top Lock, Tinsley Flight

The Top Lock is the uppermost lock (Lock No. 1) in the Tinsley flight. It marks the point where the canal reaches its highest level before continuing level into Sheffield. This lock forms the start (or end) of a series of 11 locks that descend about 70 feet toward the River Don. It takes approximately 3 - 4 hrs to navigate the full flight.

## Locks

Canal locks as we know them today were first developed in China over 1,000 years ago and later introduced to Europe in the 14th–15th centuries. During the Renaissance, Leonardo da Vinci improved their design by developing mitre gates — V-shaped gates that use water pressure to seal tightly, making locks safer and more efficient.

The canal includes the Tinsley lock flight. Originally, there were 12 locks, raising boats significantly in elevation. To accommodate a railway bridge in 1959, locks 7 and 8 were combined into a single concrete chamber.





## Tinsley Marina

Tinsley Marina is a small mooring basin located beside the top of the Tinsley locks. It provides berths and facilities for around 30+ boats, arranged across two sections of water near the top lock. The marina serves as a quiet stopping point on the canal, offering basic services such as water, electricity, and access.

## The Looping Boat

The Looping Boat is a major new public artwork by British artist Alex Chinneck that celebrates this historic waterway and its industrial heritage. The Looping Boat takes the form of a 13-metre-long canal boat, performing a six metre-high, gravity-defying, loop-the-loop, which appears to be floating on the canal.

Painted in traditional canal boat colours by a specialist canal boat sign writer and featuring the Tudor Rose (the assay mark of Sheffield), the boat also bears the name 'The Industry', after the first vessel to navigate the Sheffield & Tinsley Canal when it opened in 1819.

It is located between locks 4 and 5, just a short walk from the Marina.



**Compiled by  
Amanda Bull  
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**Robert Monkhouse**