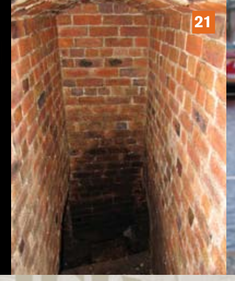
A Smile from Beyond – Brindley's Joke 18

For a man who took his work so seriously, and supervised the building of canals so tirelessly, James Brindley was not without a sense of humour. Or so the boatmen said. A narrowboat which had negotiated the double locks between the Clock Basin and the Lower Basin had to do a series of sideways shuffles to line up with the locks leading to the river. The turning space was not enough to allow a boat 70 feet (21m) long to achieve the 23° turn in one movement. As this layout was not part of the original plan, and it wasn't built till 10 years after Mr B died, it certainly wasn't Brindley who approved it, whether to cause irritation – or just mild amusement – or neither! But the name has stuck!

Hidden Torrents – Tunnels and Culverts 21

The levels of water in the various basins are partly controlled by a series of tunnels and culverts. When water levels are low in the Lower Basins, you can see the culvert openings in the basin wall at the foot of the Tontine Garden. The photograph (right) shows the culvert located beneath your feet.



Black Water Brown Water: Listen to Stourport 10

Experience a fascinating interpretation of the canal basins in a 'sound walk'. Created by Liminal, a collaboration between an architect and a sound artist, the sound piece uses the characters of canal engineer James Brindley and Sabrina, Goddess of the Severn to create a dramatic and unusual piece for the island below the Lower Basins. You can download 'Black Water Brown Water' from www.stourportown.co.uk or pick up an mp3 player from the Information Centre.

Steam Power – Keeping the Basins in Water 19

During periods of heavy traffic, the Upper Basin lost a lot of water when the locks were opened repeatedly. Initially, a water wheel on the Stour pumped water to the northeast corner of the Upper Basin. However, in 1805, the canal company commissioned Messrs Boulton and Watt of Smethwick, the leading steam engineers of the time, to build an Engine House (and Engine Basin). Their steam-driven pump delivered water along wooden troughs to the nearest edge of the Basin.

Roaring Weir 11

The job of weirs on canals is to hold water at a given level but also to act as overflows to allow surplus water to pass down. When a weir is full, it is using its 'effective length'. When boats use the locks from the Upper Basin, water coming into the Lower Basin escapes quickly, making the weir roar. You can judge the changing water level by the sound and ferocity of the water spilling over the weir.

Escape Holes – The Perforated Wall 12

The free-standing wall and the nearby footings that you see need a bit of explanation and imagination! They're the remnants of a covered dock and workshop, not unlike the large shed that stands nearby. The dock that used to be here was shown on an 1849 plan but the first buildings in this area don't appear until 1884. The wall was one of the two long sides of the building and has flood arches at ground level and holes above which allowed flood water to disperse quickly. The River Severn is still prone to rise, often suddenly, and inundate the banks.

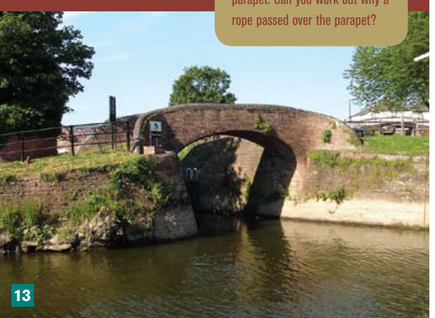
Local people think there may have been a 'coal passage' from the riverside to the lower level of the dock when the connection with the basin was closed. This passage allowed coal to be easily offloaded from boats and stored without lifting it by crane or bringing the boats into the basins. Part of the entrance floor remains to tell this tale! Incidentally, you can see from here how deep many of the locks are in order to link the canal with the Severn.

Blue-nosed – Bridge No 1 13

In 1782, the canal company built narrow locks to allow access to the Severn from the Clock Basin (albeit with the awkward turn called Brindley's Joke). This is the earliest brick bridge on site – all previous bridges at the canal basins were made of timber. Bridge No 1 was constructed using handmade bricks that were probably made on site with blue, half-round bricks forming the copings. Unusually, there are retaining walls along the lock sides.

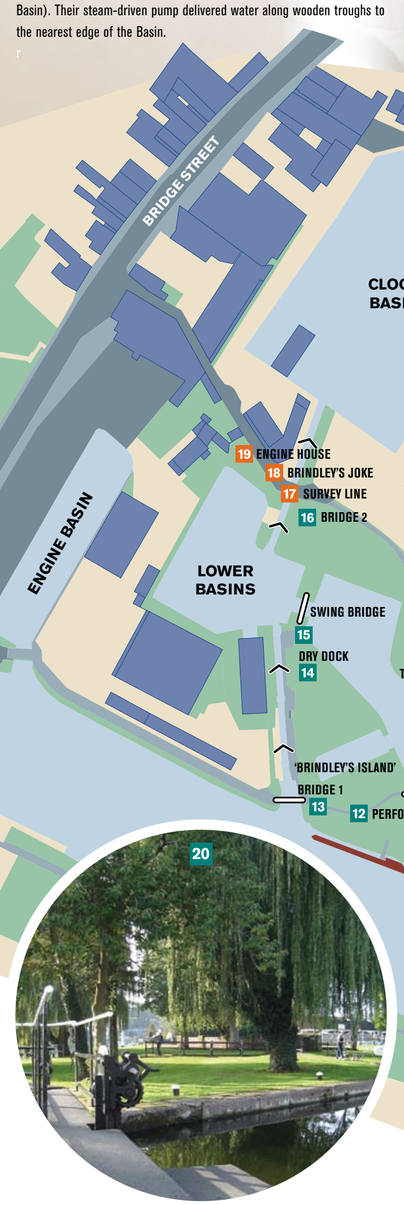
A Cut Above – Bridge No 2 16

What is now called Engine Lane crosses the narrow locks that were installed around 1782 to link Clock Basin with the Severn. Like Bridge No 1, it is made from handmade bricks but with sandstone, rather than a blue-brick, coping. You can see where an early rope-roller was fitted to stop ropes wearing the coping but it must have disappeared because there is evidence of rope-wear in the notches cut into the north parapet. Can you work out why a rope passed over the parapet?



Hull Down – The Dry Dock 14

Dry docks are essential when boats need maintenance or repairs below the waterline. You can see that the copings on Stourport's Dry Dock are made from blue bull-nosed bricks that are cross-hatched on top. These 'engineering' bricks are much tougher than the ordinary red bricks used to build the dock itself and better at resisting knocks and scrapes. After boatmen moored their craft in the dock, it was emptied of water using culverts controlled by sluice gates. You'll see, painted on the walls of the dock, the names of many boats that were repaired here.



Swinging Stourport – The Swing Bridge 15

There was probably always a bridge between the two lower basins at this point but nothing was marked on maps until the first edition of the Ordnance Survey map appeared in 1884. The present bridge replaces an earlier timber and iron bridge.

Measure for Measure – Surveying the Site 17

When Brindley surveyed the land at the mouth of the Stour, in order to plan Stourport, he probably used 'triangulation' as a means of land measurement. By dividing irregularly-shaped fields into a series of right-angled triangles, and using a base line drawn between two corners, their area could then be calculated using trigonometry. Length was measured principally by using 'chains' (literally) 22 yards (about 20m) long. It's the length of a cricket pitch, a tenth of a furlong, an eightieth of a mile. Each chain was made up of 100 links or 4 poles and range poles were set out to ensure accuracy. You can see the location of the range poles along Mart Lane (marked by street lamps) and Tontine Garden (marked by small solar lights). They show the eastern and southern edges of the stubble field purchased by the canal company from John Acton. You can see the probable survey or base line through Wilson Roberts' meadow, which is now the Lower Basins, by standing on Bridge 2 looking towards the Lower Barge Locks.

Blowing in the Wind – the Trees 20

When Stourport was at its busiest, no trees grew because working space was at a premium. Today, we have a mini-arboretum with exotic trees from foreign lands creating a sense of parkland. People like to think that seeds from far-off lands arrived in cargoes and either grew fortuitously or were planted.

The Writing's on the Wall – Incised Numbers 22

A culvert runs at a sharp angle below the south side of the former Tontine Hotel towards the Lower Basin and its route is plotted by a series of numbers on the wall. Each carefully carved measurement records the distance at right angles from the wall. It looks as if the 10ft marker was carved first, nearly at eye level, and then carved again higher up when the mason realised that all the other measurements would be where the windows are.

Trail Guide Key

- Trail Marker on site
- No Trail Marker

The Iron Warehouse wasn't built of iron nor did it and the Shed store only iron goods. It gave safe shelter to a long list of cargoes that sum up the whole canal trade: bricks, tiles, slates, goods of brass, lead iron or other metals, iron and other kind of ore, bells, alabaster, burrs for millstones, resin, raw hemp, flax and tile copper. And more!

Right: An actor in character as a canal engineer, giving a guided walk. Photo courtesy of Andrew Ashmore and Associates

Paying for Passage – The Toll-house 23

The first toll-house at Stourport stood north of what was the Iron Warehouse (Chandlery Wharf building). This was replaced, probably in the late 1820s, by an octagonal structure here, south of the warehouse. The style was unique to the Staffordshire and Worcestershire Canal and had a door or window on alternate sides so that the toll-keeper could keep a watch on boats and collect payment from them. An identical one, now a listed building, still stands on the S&WC at Stewponey Wharf, near Stourton.

Stourport's Toll-house was demolished in the 1950s, but archaeologists have recently looked at the traces that remain. Their dig exposed a fireplace, an opening in the floor for reaching nearby culverts, a sandstone threshold leading to a brick path going towards the Iron Warehouse and an iron boot-scraper.

All boats – whether trows from the Severn or narrowboats on the canal – paid tolls to use the basins at Stouport. The S&WC was a commercial enterprise and charged tolls to pay for the canal's construction and maintenance as well as dividends to the shareholders who had invested in the company. Canal Tolls were set by Act of Parliament which authorised the following tonnage rates in 1766: For all Iron, Iron-stone, Coal, Stone, Timber and other Goods 1½ pence per ton per mile. For all Lime and Limestone ½ pence per ton per mile. Landowners who had lost land when the canal was built were exempt from tolls on manure and materials for repairing roads (with the exception of limestone) 'provided such Articles pass through a Lock only when the Water flows over the Weir'. In other words, no tolls were due when there was plenty of water. However, by 1790, all tolls were reduced to encourage more traffic on the canal.

Time will Tell – The Clock Warehouse 24

The late 18th century warehouse was another of the early storage facilities at the port but the clock wasn't added till 1812. It was paid for by public subscription and is now owned by the Stourport-on-Severn Town Council. In 2006, the building was restored and all the windows were replaced. You can see two replicas of very early cast-iron windows at the far right of the building. If you look at the roof, the slates are laid in 'diminishing courses' which means they get progressively smaller towards the top. Slates salvaged from the Clock Warehouse's original roof were used on the Mart Lane warehouse.

Round the Bend – The Iron Warehouse 25

The Iron Warehouse, dating from 1771, is a striking building, painted white with its unusual rounded corner. It was one of the earliest purpose-built canal warehouses in the country and serviced what is now called the Upper Basin. By 1799 it was already subdivided 'into several parts' and known as the 'old Iron Warehouse'. The adjoining Basin Office was built in the 19th century and included a lock-keeper's house.

The company built a single-storey extension to the Iron Warehouse called The Shed, which was raised to two-storeys soon after it was built. It ran the full length of the Basin to Mart Lane and would have obscured views of the Tontine Hotel from York Street. It was demolished in the 1950s. The new strip containing the stainless steel lettering is located in the same position as the north wall of the Shed. Warehouses were essential in providing protection for the more valuable goods and materials stored on site during transhipment between boats or between boats and wagons.