

History of the Canals and Tunnels

While the full story of the Limestone Caverns harks back to the pre-history of the Silurian Age, the evolution of the actual tunnels and canals begins in the 18th century. Here we outline the key dates in their development. For the sake of brevity and ease of reading, they are divided into three chronologically ordered sections.

1175-1796

1775 - Work begins on a branch canal from the Birmingham Canal at Tipton to Colliery and limestone works under Castle Hill. (Inclusive of a 196 yds long tunnel).

- 1776 – 2nd April: a Bill for the Stourbridge Canal and Dudley Canal was passed in Parliament.
- 1776 – 6th June: the first meeting of the Dudley Company took place. Major shareholders included: Lord Dudley and Ward, T.T. Foley and local prominent businessmen. Thomas Dadford Snr was appointed as Engineer and Abiathar Hawkes as Treasurer.
The planned route for the new canal was from what is now Black Delph, through land owned by Lord Dudley and Ward, and terminating in two fields rather poetically called Great Ox Leasow and Little Ox Leasow.
- 1778 -1st June: Birmingham Gazette reports that the branch from Tipton to Castle Mill was complete. This was to become known as Lord Wards Canal and Tunnel.
- 1779 – 24th June: Dudley Canal completed.
- 1784: Proposals were put forward for a junction at the northern end of the Dudley Canal, incorporating five locks to raise the level of the canal to that of the Lord Wards Canal, and to link the two with a tunnel.
- 1785 – 4th July: King George III gave his assent to the proposals, and the Act for the tunnel and locks was passed.
- 5th July: John Snape and John Bull started to survey the tunnel, including sites for construction shafts (Approx. 12).
- 19th Sept: Birmingham Gazette published the specification for the tunnel, which was as follows: -
Width- 9' 3"
Depth of water - 5' 6"
Head room - 7'
Estimated completion date - 25 March 1788
Consultant Engineer - Thomas Dadford Snr
Resident Engineer - Abraham Lees.
John Pinkerton is employed as the contractor to undertake the construction.
- Oct: Work starts at the Parkhead end of the proposed tunnel.
- 1787 – Jan: The contractors' work was deemed to be unsatisfactory. Payments to Pinkerton were suspended, and two Dudley Committee members were appointed (Isaac Pratt and Richmond Aston) to oversee the work taking place at both ends. (Pratt at Parkhead, Aston at Castle Mill).
- Feb: Dudley Company resolved to take over the complete working of the tunnel. Thomas Dadford Snr resigned his post to take a more lucrative position with the Trent and Mersey Co. Work starts on a junction for Lord Wards Canal and the new tunnel (Castle Mill Basin).
- 1788 – Oct: John, 2nd Viscount Lord Dudley and Ward dies. His successor, William, does not share the enthusiasm for canals Isaac Pratt takes up overall charge.
- 1789 – May: Isaac Pratt outlines his responsibilities.
- June: Josiah Clowes hired to complete the tunnel.
- 1792: The Dudley Canal Tunnel was officially opened to traffic. A short cut to the tunnel was opened at the Tipton end from the Birmingham main line. This is the present route of navigation. Part of the original route still survives and gives access to the lime kilns on the Black Country Museum site.

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1796 - 1896

- 1796: The stop lock which was built in the tunnel system at Quarry Pit, adjacent to Hurst Cavern, was moved from that site to Tipton Green at Batsons Wharf. This remained there until 1846 when the Dudley Canal Company amalgamated with the Birmingham Canal Company. The only sign that this existed is the narrows at the wharf.
- 1815: A new tunnel was extended from Castle Mill Basin into the Wrens Nest Hill to terminate in two underground mine known as the East and West Mines. This tunnel extended for just under one mile, and the West Mine had a surface entrance up to the Severn Sisters on Wrens Nest Hill.
- 1849: The British Association for the Advancement of Science visited the mines. The famous geologist Sir Roderick Murchison gave a speech in Dark Cavern with thousands of people present. He had discovered a new period of geological time called the Silurian era - of which Dudley and its mine are one of the best examples in the world.
- 1853: A record 41,000 boats used the tunnel during this year. This made the company realise that Dudley Tunnel was just too small to take the amount of boats using the route. So the company decided that, rather than enlarge the tunnel, they would construct a new tunnel two miles away to the south under the town of Netherton.
- 1858: The new tunnel is built and named Netherton Tunnel. Its dimensions are 27" wide and 16" high. It was built with twin towpaths and was complete with gas lighting. The gas lighting was later replaced with electric lighting. The power for these lights came from a water turbine under the Groveland Aqueduct in Tividale, which carries the Old Main line over the Netherton Tunnel Branch. This is still in position and carrying water.
- 1858: The two locks line is between Lodge Farm and Woodside. This was built as a short cut to miss out Blowers Green Junction at Parkhead, taking about 1-2 miles off the journey. At the same time, the tunnel built at Lodge Farm near Netherton - by an engineer called Brewin - was opened up to form a cutting. This exposed a very important rock formation which is visited by geologists from all over the world. A bridge was built over the cutting which carries Hurst Lane from Netherton.
- 1884: The southern section of Dudley Tunnel collapsed due to mining subsidence. This was rebuilt during the year to larger dimensions. The theory was that over time the tunnel would sink and the roof would line up with the 1792 section. This has failed to happen and the tunnel entrance gives a false indication of the headroom in the tunnel. Because of this countless boats have got stuck over the years, and so a gauge has been fitted to prevent this happening.
- 1896: The two Blowers Green Locks outside the Pumphouse were rebuilt as one deep lock. This is now the deepest lock on the Birmingham Canal.
Boats continued to use the tunnels and canals right through to the second half of the twentieth century. But traffic gradually decreased over time.

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1959-Present day

- 1959: British waterways propose to close the tunnel.
- 1960: A protest cruise was organised by local canal societies which raised the issue amongst local people and more trips were organised.
- 1962: Dudley Tunnel was officially closed to traffic by British Waterways after no boats had passed through since the 1950s.
- 1963: The railway bridge which carried the main Stourbridge to Wolverhampton line was found to be unsafe. This bridge crossed the portal at Tipton. The railway wanted to replace the bridge with an embankment, which would mean that the tunnel would be sealed off. So a last opportunity cruise was organized. As a result of this a group was formed - called the Dudley Canal Tunnel Preservation Society.
- 1968: The railway authorities closed the railway above the portal and so the bridge was never taken down.
- 1970: The society became the Dudley Canal Trust, and work started to restore the waterway. They borrowed equipment off British Waterways, Dudley Council and local contractors.
- 1971: The Dudley Dig and Cruise was organised on 26/27 September. This was attended by over six hundred people. Over the weekend two lock pounds and one lock chamber were cleaned out and quantities of brickwork were repaired. Later that year, on the other side of the tunnel the Lord Ward Arm was restored and the first boat for many years passed up the arm.
- 1972: The approach canals were dredged. During the operation 50,000 tons of mud were pulled out of the canals and the basins in the tunnel system were dredged. Also the during this year, the locks were reopened and the first boat for ten years navigated the flight.
- 1973: Final preparations for the reopening commenced. At Easter the tunnel and canal were reopened with almost 14,000 people in attendance.
- 1975: The Trust had been operating public trips since the tunnel reopened. To propel the boats through the tunnel the method of legging was used. This became extremely tiring for the crew, so the Trust decided to convert its trip boat to electrical power and employed its first full-time member of staff to run the boat. The boat was named Electra and it was the first electrically power narrow boat in the world. It is still in service today although it has had a new passenger section built in 1981.
- 1979: The Black Country Museum opened, providing the Trust with customers for its tunnel trips.
- 1981: The southern end of Dudley tunnel had begun to collapse about 350 yards from the 1884 section. Because of this the tunnel was closed to through traffic once more.
- 1981: he Trust built its second trip boat, named George. This boat was double ended so that it didn't have to reverse out of the tunnel system. After a year in service the boat was found to be taking too much power. It was decided to chop the boat up into two halves and bolt a bow section onto each rear section. This was successfully accomplished and the second boat was called William.
- 1984: Plans were made to open up one of the limestone mines called Singing Cavern. In order for this to happen a new tunnel would have to be constructed and the whole mine would have to be rock bolted. On 23rd April 1985 the cavern was opened by Neil MacFarlane M.P. and John Wilson, Chairman of the M.E.B.
- 1987: Because of increased passenger numbers the need for a round trip became apparent. Plans began during this year and it was decided that a new tunnel should be built to link up Singing Cavern and Little Tess Mine, where an audio visual show would tell visitors the geology of the hill and mines.
- 1988: The silt was dug out of the 19th century tunnel linking Little Tess with Singing Cavern. During this operation an old wooden limestone boat was found in the silt. It was decided to try to raise the boat to preserve it. In November of that year work started on the new tunnel to Castle Mill basin.
- 1990: The new route was opened on 25th April by councilor D.H. Sparkes, chairman of Dudley's Economic Development Committee. The Trust took over an historic working boat called the Bittell. This is a 1930s BCN icebreaker tug built for Stewarts and Lloyds at Halesowen. After being sold by Stewarts and Lloyds it was taken over by British Waterways.

- 1991: The Trust's fourth trip boat was built to keep up with the public demand. It was named Richard after one of the Trust officials. Also during this year money was found from different funds to restore the fallen section of Dudley Tunnel. Work started in February and was completed on 16th April 1992. The work included the breakout of the 1792 brick lining and replacing it with a concrete tube.
- 1992: The tunnel was re-flooded in April and the opening ceremony took place in the summer. The total works including towpath resurfacing cost £1.8 million.
- 1995: The triple junction at Parkhead was restored. This involved digging out the Pensnett Arm and Grazebrook Arm. The bridges which spanned the arms were rebuilt and the towpath was resurfaced.
- 1996: To propel private boats through the tunnel the trip boat had to pull them through. This meant that a trip boat had to be lost from taking passengers - which meant that the Trust was losing money. It was decided that a tunnel tug was required. The final design was to have a boat 40 feet long, and it was to be powered by batteries. Also a diesel generator would be placed in the bow. This would be used on the open canal to recharge the batteries as they were being used. It was named after John C. Brown. He was the main BW engineer in charge of the 1992 restoration. He died suddenly a few years later so the Trust named the boat in his memory.
- Also during this year the Trust took over the disused Blowers Green Pumphouse in Peartree Lane. This was to become our offices, education centre and workshops. Previously the building was a steel stockholders warehouse and the two cranes still remain in position. Originally there were two steam pumps inside which might have pumped water from the bottom of the Delph or Nine Locks in Brierley Hill back up to the Birmingham level at the top of Blowers Green Lock. The engines were removed some time during the 20th century. Today the building is used throughout the year for administration and educational purposes. The Trust holds regular events and an annual open weekend in June when canal crafts and other canal related activities take place.