

KEY FACTS

- A canal is a man-made waterway constructed to allow the passage of boats or ships inland.
- The modern canal system was mainly built in the 18th century and early 19th century because the Industrial Revolution demanded an economic and reliable way to transport goods and commodities in large quantities. Canals were the motorways of the 18th century!
- Canals need to be level. Where there is a hill to be climbed, canals use locks to move boats up or down hill.
- A lock is a section of canal or river that is closed off by gates which control the water level so that boats can be raised or lowered as they pass through it.

ANCIENT CANALS

- The oldest known canals were irrigation canals, built in Mesopotamia circa 4000 BC, in what is now Iraq and Syria.
- Between about 520 and 510 BC Darius I built the first canal for transport in Egypt linking the Nile and the Red Sea.
- Scotland has five historic canals:
 - ◇ the Forth & Clyde, from Grangemouth to Bowling, opened 1790
 - ◇ The Monkland, from Glasgow to Woodhall, opened in 1793 (no longer navigable)
 - ◇ The Crinan, from Crinan to Ardrishaig, opened 1801
 - ◇ The Union, from Falkirk to Edinburgh, opened 1822
 - ◇ The Caledonian, from Corpach to Clachnaharry, opened in 1822

THE UNION CANAL

- runs from Edinburgh in the east to Falkirk in the west; a distance of 50 km (31 miles)
- was given parliamentary approval in 1817 and completed 1822. The total cost to build was £461,760.
- closed to navigation in 1965 and reopened in 2001 as a part of the Millennium Link project, which cost £84.5 million.
- Is a contour canal, following the 240 feet (73 m) contour throughout its length, avoiding the need for locks.
- is 1.52m (5 feet) deep and 11.28m (37 feet) wide at the surface.
- is fed by the River Almond and a reservoir at Cobbinshaw.
- is known for its engineering features, including 62 bridges, 5 minor and 3 major aqueducts, and the Falkirk Tunnel.
- was designed by engineer, Hugh Baird with input from Thomas Telford.

QUICKFIRE QUESTIONS!

WHY WAS THE CANAL BUILT?

It was built to provide Edinburgh with easy access to the minerals (lime, coal and stone) of Lanarkshire. The canal connected to the Forth & Clyde Canal at Falkirk, via a flight of eleven locks, extending transport links to Glasgow and the west.

HOW LONG DID IT TAKE TO BUILD?

The Union Canal was constructed between 1818 and 1822. The canal was closed in 1965 when the rights of navigation were extinguished by parliament, but reopened in 2001 as part of Britain's largest ever canal restoration project.

WHO USED THE CANAL?

Joining with the Forth & Clyde Canal and the Monkland Canal, a whole lowland waterway network was created. Cargoes of timber, coal, clay and sand were transported along the canal, and there was also a regular passenger service.

WHO USES THE CANAL TODAY?

Yachts, cruisers, narrowboats, holidaymakers, canal societies, walkers, runners, cyclists can all be seen enjoying the Union Canal today.

ANY QUESTIONS? CONTACT ME!

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SCOTLAND'S CANALS

A true feat of 18th century engineering and determination, Scotland's canals are an important representation of our country's proud industrial heritage, representing the people who built the canal network across Scotland, the communities that grew up on their banks, and the industry that was supported by them.

From the Caledonian Canal in the north to the Crinan in the west and the Forth & Clyde, Monkland and Union Canals running west to east throughout the central belt, all five of Scotland's remaining canals are designated as Scheduled Ancient Monuments. The estate that Scottish Canals looks after also includes over 100 listed buildings, artefacts and archival material. There is a real need to restore and protect this important national collection today, and to develop a new generation of people who can be the canal's protectors of the future.

Before the 18th century rivers served as a means of transport, but being irregular in width and depth they could be inconvenient for inland transport and there was no formal road system. Canals were built to overcome these problems and create an inland transport system for commercial and trade purposes. Canals ended the situation in which heavy materials could only be moved short distances or where navigable river or coastlines happened to be available.

Scottish transport and industry relied on seaborne rather than river navigation. In the 18th and 19th centuries our canals provided new links with coastal centres, improving access to supplies of raw materials such as coal, iron-ore, stone and agricultural produce. Places like Grangemouth and Maryhill in Glasgow were also once brand new 'canal-towns'.

Mainly, Scotland's canals made cheap coal widely available. Inland coalfields expanded massively and the supply of coal powered the Industrial Revolution of the 18th and 19th centuries.

UNION CANAL

The Union Canal was first conceived in 1793, but construction wasn't given Royal Assent until 1817, after a lot of wrangling over the proposed route. The 31-mile long canal was designed to provide Edinburgh with links to the minerals of Lanarkshire, carrying coal particularly into the heart of the expanding capital city. As an inland canal, the Union was built for barge traffic only, and is therefore smaller than the Forth & Clyde Canal.

Unlike roads and railways which can easily rise and fall with the landscape, canals can only manage mild gradients, so engineers sought as level a line as possible. The Union Canal is a 'contour canal' and follows the 240 foot (73 m) contour throughout its length, thereby avoiding the need for locks, but requiring instead a lot of bridges and aqueducts to maintain the level line.

The Union Canal joined the Forth & Clyde Canal at Falkirk, via a series of eleven locks, meaning boats could travel further west to Glasgow and Bowling. At around 15 minutes per lock, travelling between the canals was a slow process, so passengers would alight from their boat and refresh themselves at the nearby inn while the boat travelled through the locks.

The successful businessman and entrepreneur, William Forbes, who owned Callendar House, added to the expense and difficulty of building the canal by insisting that it should avoid travelling through his estate. This required the construction of a 690-yard hand-hewn tunnel through Prospect Hill outside Falkirk.

Rise and fall

In 1842 train services began to run along the newly constructed line between Glasgow Queen Street and Haymarket in Edinburgh's west end (the line's eastern terminus at that time). The progress of steam power and the growth of railways in the 19th century were difficult competition, and soon both freight and passengers were converting to rail. It is reported that the tenant of the inn at Port Downie in Falkirk had suffered such a loss of trade when the Edinburgh -Glasgow railway opened in 1842 that she had to sell her furniture to pay her rent arrears. By 1849 the canal had been eclipsed to the point where it was bought over by the Edinburgh & Glasgow Railway Company

It fell into slow decline and by 1920, all commercial traffic to Edinburgh had ceased. In 1922, Ports Hamilton and Hopetoun in Fountainbridge were closed, drained and sold to Edinburgh Corporation. The canal was closed to commercial traffic in 1933 and rights of navigation were extinguished by Parliament on 31st December 1965.

The canal reborn

In 2001 the Union Canal was triumphantly re-opened as part of the £84.5m Millennium Link project - the largest canal restoration anywhere in Britain. The project incorporated the construction of the iconic Falkirk Wheel. When opened in June 2002 the Wheel reconnected the Forth & Clyde and Union Canals for the first time in over 70 years.