

# Fact File

## An introduction to the Knowle Winter Works Project



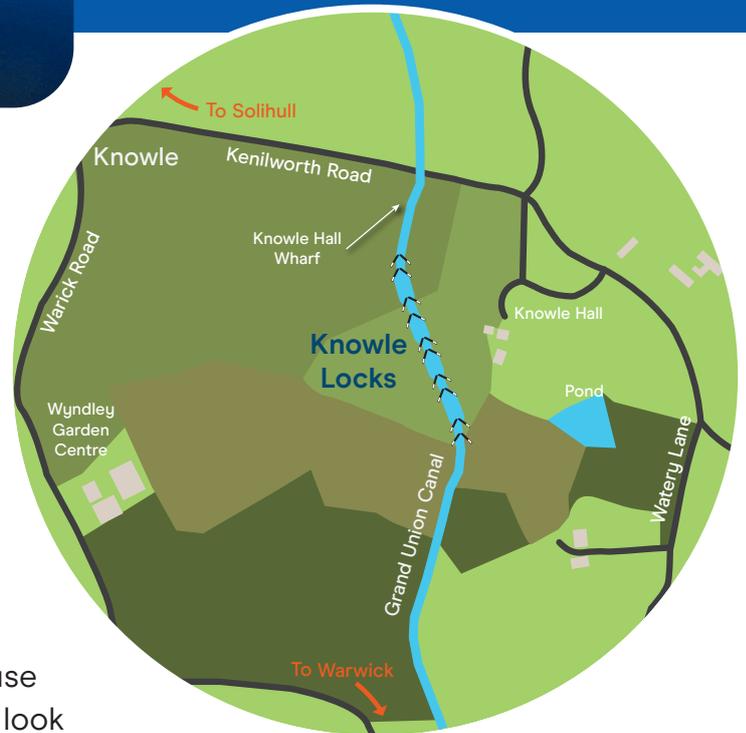
Knowle Locks, on the Grand Union Canal in Solihull, is a stretch of canal consisting of five **wide** locks. The Grand Union Canal is the longest canal in Britain and Wales – it runs from Birmingham to London. The locks at Knowle are used to carry boats 40 feet uphill and downhill.

### Knowle History

Knowle Locks were built in the 1930s. This was a time when the canal transport systems were trying hard to compete with the new and much faster rail network. These wide locks were constructed next to the old single locks and can accommodate two narrowboats side-by-side. They managed to speed up the movement of boats through this stretch of canal.

The single locks, which the wide locks replaced, date back to the 1790s. These are no longer in use but you can still see the remains of them if you look carefully. The old locks act as weirs and help to move water around the system.

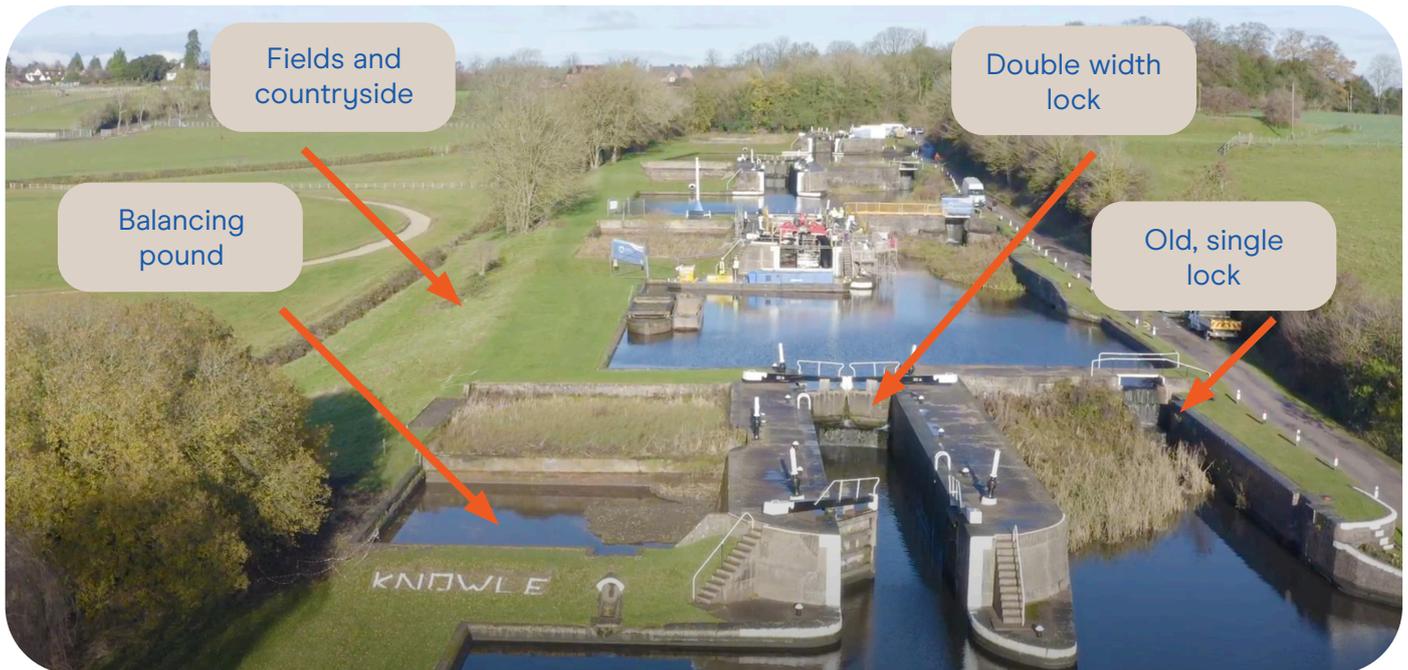
Knowle Locks are used around 1,300 times a year. With many boats traveling along our canals and through our locks, there's always work to be done to keep things running smoothly. We choose the winter to do our major maintenance work because it's the time when the least amount of boaters are around.



## Looking after Knowle Locks

The location of Knowle Locks makes maintenance particularly tricky. There are no main roads running alongside them and they are surrounded by farm land.

On one side are the old locks, on the other side are balancing ponds (these are contained areas of water used to maintain water levels in the locks). The locks are effectively each on an island!



## Lock Gates

Recently, maintenance work was carried out at lock number 49 at Knowle, this included the replacement of the lock gates. Lock gates usually last for around 25 years before they need to be replaced. Very often we use divers to monitor the condition of the gates and to check if they need to be repaired.

Lock gates are all different shapes and sizes so we work with specialist gate makers who use traditional techniques and make sure that each one fits perfectly. At Knowle Locks the bottom-end gates are 5 meters tall and the top-end gates 2.5 meters tall.



## Project Management

The 'winter works' at Knowle was a huge project that cost over £170,000 and took almost two years of meticulous preparation and planning.

There was lots to consider and many different members of staff were involved, including planners, engineers, ecologists, and heritage advisors.



The work needed to be done quickly and efficiently but with minimum disruption to the waterway environment.

Draining a lock is a huge job so it was important to also consider what other maintenance tasks could be done whilst the lock was empty – like replacing the old lock ladders to improve their safety.

We needed to hire specialist teams of people and equipment. Because of the lock's position and width, we hired a very unusual crane. This 'spider crane' could span across the lock with long supporting legs. It can also fold up very small to gain access to tight spaces.



The planning exercise involved many complicated **decisions**, such as:

- What method will we use to drain the lock?
- How will we protect the fish and wildlife?
- How will we get the huge new gates to the site and into position?
- How will we keep the site safe and secure?

Find out more about this fascinating project by watching the [open day videos](#) and downloading the 'Knowle Winter Works Activity Pack'.