

BR Tour2016 - South Yorkshire

LOCK PROCEDURES

These notes should be read in conjunction with the general guidelines on rowing through locks, and contain specific recommendations for the locks on the Aire & Calder Navigation, New Junction Canal and Don Navigation, which will be encountered on the 2016 British Rowing Tour from Leeds to Mexborough.

Lock Dimensions

Waterway	Lock Name	Length	Width	Rise/fall	Direction
Aire & Calder	Fishpond	60 m	6 m	2.3 m	Downstream
	Woodlesford	60 m	6 m	2.3 m	Downstream
	Lemonroyd	60 m	6 m	4.2 m	Downstream
	Castleford (flood)	Large irregular shape		0 - 0.5m	Downstream
	Bullholme	60 m	6 m	2.5 m	Downstream
	Ferrybridge (flood)	long	wide	0 - 0.5m	Downstream
	Whitley	60 m	6 m	2.1 m	Downstream
	Pollington	60 m	6 m	2.2 m	Downstream
New Junction	Sykehouse	65 m	6 m	2.5m	Upstream
	Long Sandall	70 m	6 m	TBD	Upstream
Don	Doncaster	70 m	6 m	TBD	Upstream
	Sprotborough	70 m	6 m	TBD	Upstream
	Mexborough Low	70 m	6 m	3.5m	Upstream

Traffic Lights

A traffic light system indicates whether leisure boaters can operate the lock themselves. An amber light indicates that there is no lock keeper present and the lock can be self-operated by boaters. This is the normal practice these days except when commercial traffic is expected. If there is a green light showing, a lock keeper is present and the lock is ready for you to enter. A red light indicates that the lock keeper does not want you to enter the lock because a commercial craft is being handled.

Bank Party

Because none of these locks are manned, other than for the occasional commercial vessel, it will be necessary to have a bank party to operate them. The bank party will consist of 3 people - one either side of the lock and one to operate controls and provide back up.

Each bank party will be equipped with:

- C&T/BW keys to operate lock controls
- Two Throw lines and rope to place across the lock
- A Loudhailer

All members of bank party must wear life jackets / buoyancy aids

Crews in locks

All members of the crew should wear life jackets / buoyancy aids when going through locks with significant rise or fall - this is less important for the Castleford and Ferrybridge flood locks.

When the lock is in operation all crew members must be alert to their role in maintaining the position and stability of their boat.

Lock Operation

The locks are operated by means of an electric control panel at each end of the lock. There are detailed instructions on the control panel, but in summary the sequence of actions is as follows:

- Starting from the end where the boats will enter the lock, insert the lock key and turn it clockwise – the "Available" should illuminate followed by the "Ready" light
- If the "Ready" light does not come on, check that the water level is the same both sides of the lock gates. If not, press "Open sluices" for a few seconds and wait for the water level to equalise – the "Ready" light should now come on
- Press "Open gates" and wait for the boats to enter the lock
- Press "Close gates" and wait for the gates to close
- Press "Close sluices" and when the "Close sluices light comes on, remove the key
- Go to the other end of the lock and insert the key. Wait for the "Ready" light to come on
- Press "Open sluices" and wait until the water level is the same both sides of the gate. The "Open sluices" light will come on
- Press "Open gates" and wait for the boats to leave the lock
- Press "Close gates"
- Press "Close sluices"
- Remove the lock key

The sluices open in three stages. At first the flow will be quite gentle, then at stage 2 (when there is still a big difference in water level) the flow will be much stronger, and finally, although the sluices are fully open, the water levels are approaching equality and the flow will be less. Stage 2 is therefore the most hazardous. The water enters and leaves the lock through sluices in the walls or floor of the lock, not through the gates as on some waterways such as the Thames.

Entering and Leaving the lock

- When going upstream, boats should not enter the lock cut until advised by the bank party that the gates are open. There is significant turbulence when the lock is emptying, which could cause boats to crash into each other or the lock walls.
- Manoeuvring in the lock or confined spaces if the sculls / oars cannot be fully extended should be done by the cox using the canoe paddle

Control of boats in locks

For your safety it is very important that crews adhere to the following key points

- To allow for turbulence when "locking up" and for being drawn down to the lower sluices/gates when "locking down" crews must stay back 20-25m from the gates where they will exit the lock.
This limit will be marked by the bank team by a rope across the lock.
- A maximum of 8 boats will be allowed locks, other than Castleford and Ferrybridge which are very big locks with a small, or even no, rise and fall. These two locks may be big enough for the whole group and the water level changes very slowly.
- The largest / most stable boats should enter first as they will be in most turbulent area
- The boats should line up in pairs, on either side of the lock
- The lead pair of boats should be bows on the limit line set by the bank party
- When "locking up"
 - the person at bow must pass the bow rope up to the bank party so it can be looped around an appropriate bollard and passed back. Bow must then keep control of this line to ensure the bows of the boat do not swing out in the current as the lock fills.

- the cox should keep the stern of the boat in position using a boat hook on the rising cables on the side of the lock or the stern line as appropriate.
- other crew members should keep control of their sculls/oars to keep the boat stable and prevent it getting too close to the lock wall.
- When "locking down"
 - the cox should hold the boat in position using a combination of the stern line slipped around a bollard and the boathook, holding onto fixings on the wall of the lock.
 - The stern line should be free to move at all times and not tied off as it must allow for the boat to fall with the water level.

Failure of lock mechanism

In the unlikely event that the lock mechanism fails, the sluices may open too far when the "Open sluices" button is pressed, causing the lock to fill or empty much faster than normal. Going downstream this should not cause serious problems for the boats, provided the normal safety precautions are followed (avoid catching the riggers or oars on the sides of the lock and hold position at a safe distance above the lower gates).

Going upstream, there will be a big surge of water coming into the lock. Crews should hold position using the ropes as described above to keep the boat head into the waves and use their sculls/ oars on the water to maintain stability

Emergency situations

In the event of man overboard or capsize, crew members should hold onto their boat. The bank party can additionally use throw lines to help pull people to a safe position.

If the bank party consider that there is a significant danger to life, they should press the emergency stop button on the control panel. However, there is a time delay before the sluices close, so provide assistance to the crews in the lock as far as possible.

The Canal & River Trust have to be called to send an operator to reset the controls – this will typically take 2 hours. They will fill the lock, allowing crews to exit at the upstream end only.