



British
Waterways

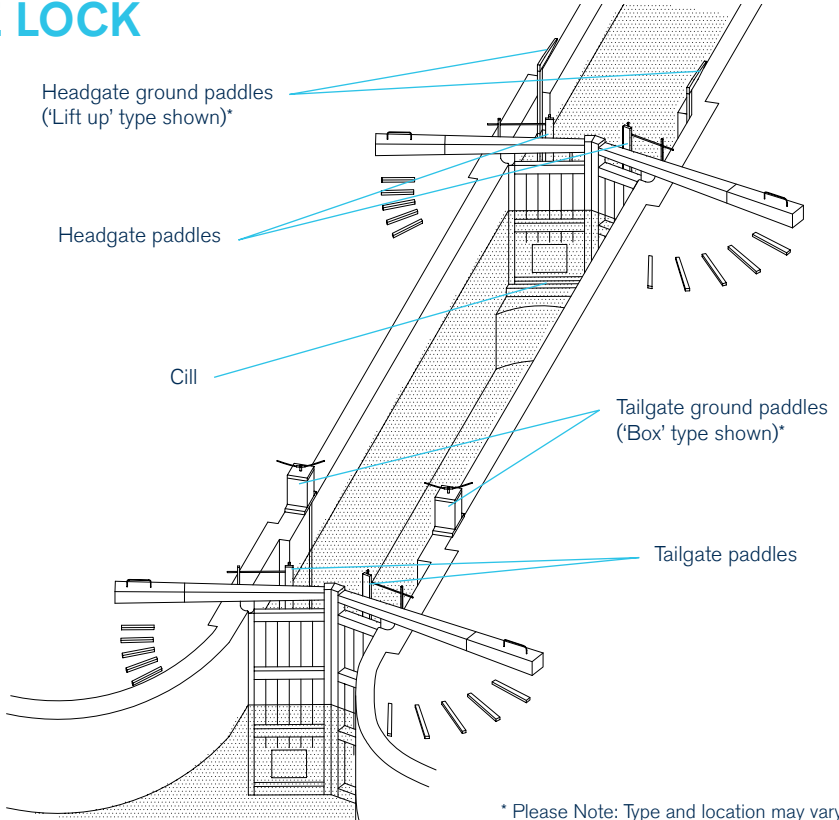
OPERATING A LOCK ON THE LEEDS & LIVERPOOL CANAL



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This guide is intended to give you boating basics for operating a lock on the Leeds & Liverpool Canal. Reading it before a journey will help you plan ahead and familiarise yourself with lock operation. You will find instructions for Going Up and Down The Lock (including staircase lock flights), as well as annotated diagrams and key safety messages. A pdf version is also downloadable from www.waterscape.com.

THE LOCK



* Please Note: Type and location may vary



Lift Up ground paddle



Box ground paddle

Ground Paddle

Two types: 'Lift Up' & 'Box'

Called a ground paddle because they're on the ground next to the gate. A sliding shutter which when raised allows water to flow through from the upper level into the lock.

Gate Paddles

Called a gate paddle because it's on the gate. A shutter over an underwater hole in the gate which, when raised, will allow water through.

WINDLASS

To operate canal locks you will need a windlass (lock key) to turn the gear which winds up the paddles to allow water in or out of the lock. Wind the paddles up slowly but firmly.

How to operate a windlass

- Check that the safety catch is ON the ratchet cog (1)
- Place windlass on spindle and wind paddle up (2)
- Take windlass off spindle
- To close paddle, place windlass back on spindle and turn it slightly so that you are able to lift the safety catch off and away from the cog with your other hand. (3)

- Carefully wind the paddle down.
- DO NOT let go of the windlass as the paddle may run down, spinning the windlass and possibly causing injury.
- The paddle is fully down when the white marker on the stem meets the white bracket on the gate. (4)

Note: Keep your fingers, hair and clothing out of the paddle gearing



KEEPING SAFE

DO

- Wear a lifejacket
- Pay close attention to what is going on around you
- Take care when walking around slippery surfaces such as steps and walkways
- Keep children away from the edge of the lock chamber
- Act quickly if boat gets caught up
- Contact your hire company if your boat has taken on water

DON'T

- Dangle hands or feet over the edge of the boat
- Leave the windlass on the spindle unattended
- Stand on the roof of the boat whilst operating a lock

If someone falls into a lock:

- Close all paddles
- Stop the engine and make sure boat remains still
- Throw lifeline / lifebuoy
- If they can not reach the ladder or be helped on to the boat, you may need to slowly fill the lock so they can climb out

LOCK OPERATION

Going up the lock

- 1 As you approach the lock, let your lock operator(s) off at a safe point to check the lock ahead. If you have enough crew, one should remain on the front deck to throw a rope up when the boat is in the lock.
- 2 Make sure the boat's front doors are closed so that any water leaking from the lock gates does not go into the boat.
- 3 If the lock is full and another boat is approaching from upstream, give them priority.
- 4 If no boat is approaching, check that the headgates, ground paddles and headgate paddles are fully closed.
- 5 Wind up tailgate paddles to empty lock. (1)
- 6 When the lock is empty, open lock gates and then wind the paddles down (Gates will open with ease when lock is empty).
- 7 Take the boat steadily into the lock on the ladder side.
- 8 When the boat has entered the lock, close the gates and rope up by throwing front and back ropes up and loop round bollards and back to the boat to keep boat against lock side (take an extra turn around the bollard to stop the boat pulling you, but DON'T tie up). (2)



LOCK OPERATION

Going up the lock

- 9 Operate the ground paddles on the same side of the boat.
- 10 When water covers gate paddles, open them in stages until fully raised. (remaining numbers then need adjusting).

A second lock operator may open the paddles on the other side of the lock, but each one should be opened on the boat's side before opening on the other side of the lock. (Do not allow the boat to become positioned diagonally across the lock).

- 11 When lock is full, open gates (where applicable ensure lift up ground paddles are down before gates are fully open). (3)



- 12 When gates are opened, gather in ropes and take boat steadily out of the lock, ensuring gates, ground paddles and gate paddles are fully closed.

HAZARDS

If your boat gets caught up on lock gates or stonework of lock wall:

- Immediately shut down all open paddles (could be physically tough, but you **MUST** ensure that all paddles are fully closed)
- Open tailgate paddles until boat is released
- **Check for possible damage**
- Resume lock operation

LOCK OPERATION

Going down the lock

- 1 Let crew off at a safe point before the lock.
- 2 If the lock is empty and there is a boat approaching from downstream, give them priority.
- 3 If no boat is approaching, check that tailgates and paddles are fully closed. (1)



- 4 Open headgate and ground paddles and when lock is full, open gates ensuring that lift up ground paddles are closed before gates are fully opened.
- 5 When the gates are open, proceed steadily into lock.
- 6 Make sure all paddles are closed and when boat has entered lock, close the gates.

LOCK OPERATION

Going down the lock

- 7 Position the boat parallel to the lock side, with the back of the boat forward of the cill marker (2), and the front clear of the tail gates. (3)



- 8 Use the engine and/or ropes round bollards to keep the boat in this position as the lock empties. Do not allow the boat to become positioned diagonally across the lock. Note: Ropes should be loosely looped round bollards to help maintain position, but not tied to anything.
- 9 Open tailgate paddle (if a second lock operator is present, they can open the other tailgate paddle). Be aware DO NOT wander away from paddles while the boat is descending in the lock.
- 10 When the lock is empty, open the gates and close the paddles.
- 11 After the boat has left the lock, ensure the gates and paddles are fully closed.

HAZARDS

If your boat gets caught up on the cill, lock gates or stonework:

- Immediately shut down all open paddles (could be physically tough, but you MUST ensure that all paddles are fully closed)
- Quickly open ground paddles and fill the lock until the boat is free
- Check for possible damage
- Resume lock operation

STAIRCASE LOCKS

Sometimes you'll find a number of locks joined together – known as a 'staircase'. That means the bottom gates of one lock are also the top gates of the next, and water from one lock fills the lock below. Usually you need to prepare all the locks before you start through the staircase.

Usually if you're going uphill, the bottom lock should be empty and the rest full. If you're going downhill, the top lock should be full and the others empty.

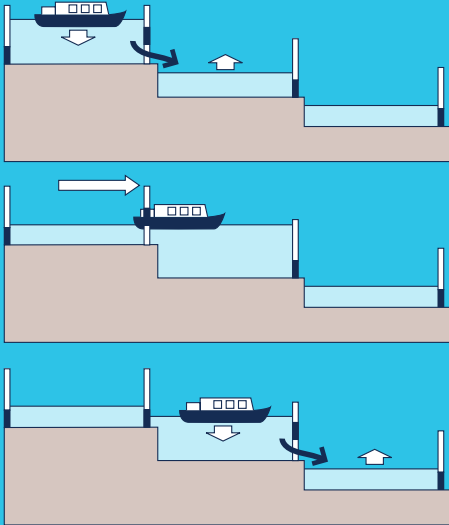
Never empty a lock unless the one below it is already empty. But bear in mind that locks should never be emptied completely

– the lowest water level should still be deep enough to float your boat. Some staircase locks have markers to show you the level. Once you've prepared the locks, make sure all the paddles are fully closed.

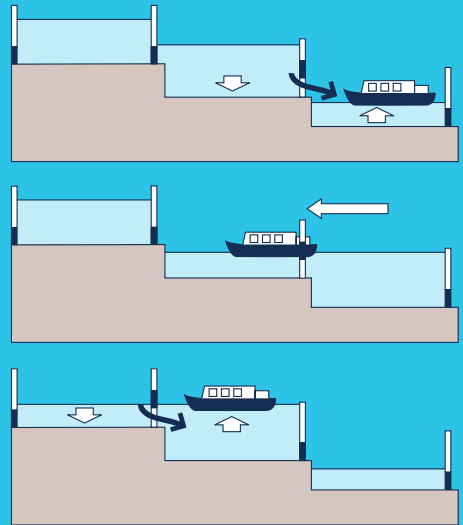
If the water level isn't right, you could get stuck on the cill between the locks. If you do, just make sure the paddles below the boat are closed and slowly let the water into the lock from the lock above using the ground paddles only.

Then, please follow the 'Going Up The Lock' (page 4-5) and 'Going Down The Lock' (page 6-7) guidance.

GOING DOWN THE LOCK



GOING UP THE LOCK



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