

Pilotage

Planning for pilotage

Being one step ahead of the game is key to effective pilotage. Only then will you know what to expect and what's lurking around the next bend.

It's useful to construct a pilotage plan before you start, so that all the necessary information for entry is to hand. The skipper can then interpret the plan into what is actually seen and decide which pilotage technique will keep the boat out of trouble.



As a skipper, having an armoury of pilotage techniques gives you every chance of success.

If one technique doesn't work, another should. Used correctly they'll help you get in and out of port, but above all, keep the plan simple and easy to understand.

Pilotage techniques

GPS

The usefulness of chartplotters in a pilotage situation largely depends on the size of display and the speed that the chart page rewrites.

Many small plotters cannot display enough of the chart at the correct level of zoom, so as the boat moves across the page, the page cannot keep up making it hard to know what is coming next.

The split screen function on larger screens can be set to different scales allowing both close-up and the bigger picture, to be viewed at once.



A plotter can give a false sense of security as GPS and charts can be subject to errors.

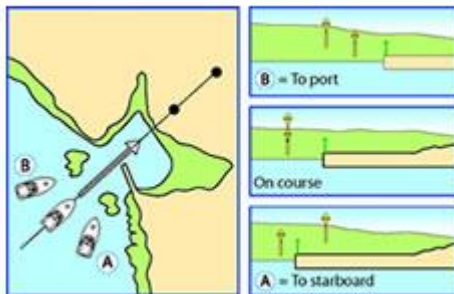
Verify a GPS or plotter position with what you can actually see out the window.

A 30m error in position could be irrelevant out at sea but a real problem in a narrow channel.

Used correctly, a chartplotter gives a great reassurance of your plotted position.

Transits

Line up two objects to keep you on your intended track. They could be transits marked on the chart or natural transits you find to keep you on the correct course over ground towards the entrance.



Many transits are on land so there's a time when you'll need to turn off the transit and onto the next course otherwise you may end up on the beach.

Bearings

A prominent mark can be used to give an approach bearing. A bearing on a single object still requires a plan to ensure that the boat is steered the correct way when the bearing is not correct.

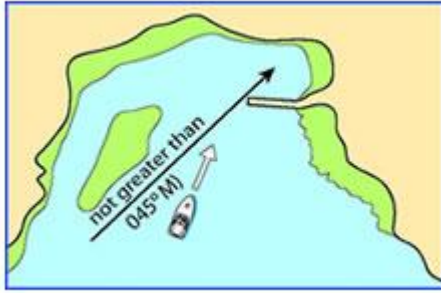
Have both a hand bearing compass and the boats compass available so that the best one can be used for the specific job.



A clearing bearing allows you to approach an entrance which has obstructions close to the intended track.

If you are clear of that bearing the obstruction will be clear.

If an entrance has obstructions either side, a 'cone of approach' can be constructed.



A back bearing is used when there is nothing obvious ahead to confirm that your course will clear an obstruction.

When establishing a back bearing it can be tricky to know which way to turn when the bearing is not correct.

Always pre-plan a system so that you know which way to turn. If the back bearing reads 165° (T), which way would you turn? A (+) or (-) sign placed either side of the track may help you know whether the bearing will read more or less if the boat is off course.

A back bearing can be used in conjunction with a side bearing or crossing a depth contour for a positional update. Once a back bearing is 'on', it may be possible to convert it to a transit so that the hand bearing compass is not required.



Tide

Tidal height dramatically changes what you see, compared to the charted view.

A channel may look straight forward on the chart at low water when all the banks are exposed, but a rising tide covering the banks makes the obvious channel disappear, just leaving a scattering of marks.

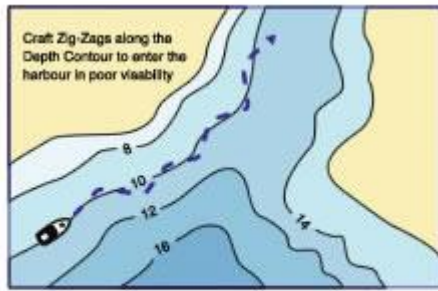
Noting the bearing and distance to the next mark on your plan indicates which way to go from one to another.



It is sometimes essential, to calculate the tidal height before entering or leaving a harbour.

Knowing the height of tide also helps if you need to dive out of a channel whilst a ferry or large vessel passes.

Contours



Buoys and marks are usually laid on depth contours because these contours define the channel.

When buoyage is sparse or identification difficult it may be better to follow a contour on one side of the channel instead of trying to stay in the middle.

Then when the depth falls, it is easy to know which way to turn to find deeper water.

This is a good technique at night or in poor visibility when identification is harder, marks may not be lit or if there is a cross stream making you stray across the channel.

Constructing the plan

Try not to rely on just one pilotage method to get you in.

Transit marks are useless if you can't spot them, so use not only the buoyage and marks but long standing features such as headlands, cliffs and towers which rarely disappear and make a good back up.



Make up a detailed plan of your intentions.

A simple sketch of the port with written notes and diagrams can be referred to easily on deck and tailored to what is important for your boat to enter.

This also keeps the chart out of the way, in the dry as a back-up. Make the plan before the boat leaves.

Trying to find time on route, when tired, seldom works.

Running the plan

A harbour may well have an eight knot speed limit but if you can only 'think' at four knots, it's time to apply the brakes.

Slow the boat to a speed that you can compute all the pilotage information and translate your paper plan into what can actually be seen.

Delegate tasks if you have spare crew and give everyone a job, then use the information they feed you.

Trying to take bearings, watch depths, look at the pilotage plan and steer at the same time is looking for trouble. Many powerboats sit low in the water so stand every now and then to increase your range of vision.

If in doubt...

If you are unsure of your way ahead, stop or turn into the stream whilst you sort out exactly where you are. Alternatively, go back to your last known position