

Single-handed safety

Stan Lester describes how he kept safe on his round-Britain cruise.



Indalo in Aberdeen

When I sailed around Britain in 2005 two-thirds of the distance was completed single-handed, including five passages of fifty miles or more. I've also made several solo crossings to the Channel Islands and Scilly as well as a few sixty-mile-plus passages along the coast. These are a few notes outlining the tactics and equipment I use to minimise the risk. They describe what works for me and what I feel comfortable with. Other people will reach different conclusions, and for authoritative advice I'd suggest the RYA, RNLI or Coastguard.

Assessing the risk

Before I start on the real stuff there's a bit of theory that's used in risk assessment that works as well at sea as anywhere else. It's 'priority = hazard x risk' – which means assessing how serious it would be if something went wrong (the hazard) and multiplying it by the chance that it will go wrong (the risk) to give a priority rating for doing something about it. If you think of both on a scale of 1-3 (low to high), something that's both low-risk and low-hazard (unlikely to happen and not very serious if it does) would come out with a score of 1 (1x1), while something that's high-risk and high-hazard (fairly likely and life-threatening) would score 9 (3x3). Most of the time the 9s shouldn't feature because common sense will take care of them (e.g. don't go out in a 27-footer in a force 10), and the 1s are probably not worth doing too much about. It isn't too difficult though to come up with a few fours and sixes, and there will definitely be some threes and twos. Some of my nightmares are falling overboard while sailing single-handed (worse if it's at night), being laid out by a gybing boom (particularly if it results in me going in the sea), and holing the boat by hitting a semi-submerged container. Slightly less alarming are fouling the prop, running out of fuel (or getting water or air in it), and being seasick (though being incapacitated by seasickness while sailing solo must rank in the more serious category). Happy sailing!

Proficiency

The first part of being safe must be having a reasonable level of competence and also knowing where it ends. I learned most of my more 'advanced' sailing skills (such that they are) after I bought my own boat, but I did get some more experienced sailors on board and finish off my RYA training. For single-handed sailing I started with motoring in the river and working out how to step ashore and tie up (or pick up a buoy) safely on my own. Then I graduated to short coastal passages under sail. Even doing the ten miles from Dartmouth to Brixham let me start working out how to 'multi-task' safely, how to get the sails up and down promptly, what I needed to have in the cockpit, and how much I could depend on the autopilot for steering. From there I graduated to longer passages and by the time I was contemplating going around Britain I'd been down to Penzance single-handed, battled with tying up the main in a near-gale and made a couple of 60-mile solo passages including a couple of hours of night sailing. I also went on a safety weekend at the Lifeboat College and spoke to other people about how they managed. For the round-Britain cruise I planned to have crew for any passage over 60 miles, plus the stretches of coast where there wouldn't be a port of refuge within 20 miles if I was caught out by worsening conditions. By the time I was halfway around I was confident enough to have done the whole trip solo, which was just as well as I was without crew from Hartlepool onwards.

Nowadays I reckon that if I've slept well beforehand I can stay alert enough to be safe for 20 hours, but a quarter of that should be a safety margin so I'm looking at 15 hours maximum, giving a range of 75 miles under engine. If there's half a chance of a roughish sea or strong winds I shorten my estimate considerably, so realistically I'd only attempt a channel crossing (Dartmouth to Guernsey or Alderney) in a force 4 or less. I'm not immune to seasickness so in less than ideal conditions I bank on far less time at sea: five hours in an open-water force 6 and I'm wishing I was on dry land. It's not just the comfort factor, it's the danger of becoming too fatigued and lethargic to cope if anything goes wrong.

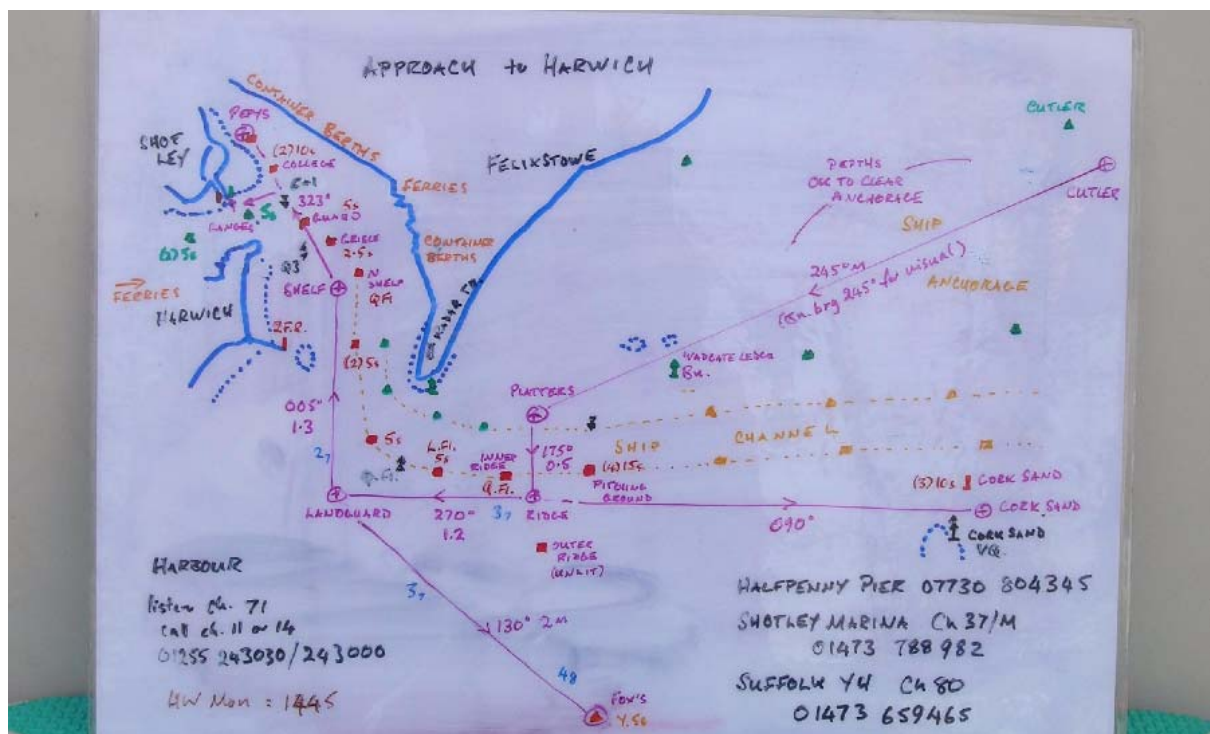


Preparing to sail

Preparation

So that's the proficiency bit, now for preparation. The guiding principle is that it should be possible to complete my passage without needing to go below other than for unavoidable jobs like switching the lights on or off or boiling the kettle. There's both a safety factor to this (what if there are other boats close by when I want to check the chart?), and avoiding setting off seasickness if conditions are rough. Part of the preparation is having the right equipment (and having it close to hand), which I'll say more about in a moment, and part is the passage-planning and navigation. There's also the matter of being physically and mentally prepared, which generally means getting enough sleep before setting out and having enough of the right kind of food to eat (for an example of what not to do, have a look at my Channel crossing article on <http://homepages.rya-online.net/indalo/>).

Passage planning and navigation to start with. There's more on this in the navigation article on the above website, but basically I sketch out my passage plan in colour on a laminated waterproof A4 card and keep it in the cockpit on a waterproof clipboard (actually a plastic chopping board from Morrisons with a big bulldog clip) tucked behind a halyard bag. The passage plan also has things like a summary of the last weather forecast, essential tidal information, times and channels for weather updates, and radio channels and telephone numbers for coastguard and harbours. I also make up waterproof pilotage plans for the port I'm heading for and any alternatives or ports of refuge, again with essential information such as tide times, tidal restrictions and local contacts. Clipped in place with this is the deck log, together with waterproof pen to fill it in. I keep the relevant charts on the chart table ready to consult, and very occasionally have a large-scale chart ready for entering harbour in a quarter-Admiralty size clipboard with a semi-weatherproof pocket. If needed I can bring this up on deck and use it to assist with more difficult pilotage like heading upriver, but it's never a substitute for the pilotage plan.



A pilotage plan

I normally navigate by GPS, while keeping a check against the more traditional sources of information. I've never had the GPS fail or misreport a position, but a couple of times I have entered waypoints incorrectly. My fixed GPS (a Garmin 128) has a cockpit repeater showing position, speed and distance, and I also keep a hand-held Garmin 76 attached to the bulkhead with waypoints and routes entered. In pilotage situations I use the 'map' screen on the 76 to give me a line to follow between waypoints – though never blindly.

The kit

Now for equipment. I won't list everything on board, but some idea of what I carry can be gained from the picture on page 2. In the cockpit I have a hand-held VHF in a waterproof bag; hand bearing compass; a bottle of water; 35mm film canister with peppermints and a couple of fast-acting seasickness pills; packed lunch and miscellaneous other food; canned fizzy drink; and the navigation clipboard mentioned above. I normally keep three white flares close to hand, and at night my equipment includes a powerful rechargeable lantern and a headlamp with both red and white LED lights. Down below I have a mobile phone and, on extended cruises, a computer. The computer normally stays in a drysac on passage, its main nautical use being to check the weather forecast via wi-fi or mobile phone link.



Personal safety equipment

At sea for personal safety I always wear an automatic lifejacket fitted with lifeline, crotch straps and light, plus a bumbag with the kit shown in the picture: 406/121MHz personal locator beacon with GPS, safety knife, whistle, light, mirror and two double-ended (red / orange smoke) flares, plus a small compass. And a knife / shackle key in my pocket I clip on when leaving the cockpit, in darkness, and if leaning over the rail (when I'm careful to choose a point that won't let me fall over and dangle in the sea). Unless conditions get rough I think the chances of falling out of a deep cockpit like *Indalo's* are so remote that they are outweighed by the potential to trip over the line and cause myself injury on board. Just below the companionway are two waterproof containers one with flares, and the other serving as a grab bottle with a few additional pieces of equipment including more flares, a spare GPS, another small compass and knife, mirror, water bottle, a pack of food bars, seasickness pills and basic first aid kit. The idea is that this would be the first thing to be put in the liferaft if it came to the worst and I had to abandon ship.

I've never come to a satisfactory conclusion about gybing booms other than to keep an eye on the sail when running downwind, avoid sitting where my head could be struck by the boom, and fit a preventer if running for any distance. Single-handed I usually sail with one reef in the main because it angles the boom upwards slightly giving an extra four inches or so of clearance, as well as making the boat easier to balance for sailing with the windvane.



OGT Mark 1 windvane

Which brings me to self-steering gear, something I wouldn't sail single-handed any distance without. Until the round-Britain cruise I made do with just an autopilot (originally an ST2000 tillerpilot, later a Simrad TP20), which is fine for motoring but has a few shortcomings under sail. I've never found that the instrument can react quickly enough in anything other than a fairly smooth sea, it doesn't of course take account of wind shifts (though apparently a small windvane can be attached), and there's a risk of running the battery down. A couple of times I've motorsailed just to enable *Indalo* to steer automatically, once when broad reaching in a force 6 when there was enough wind to push her along at seven knots through the water. The obvious answer was to install a windvane self-steering system, though I balked at the £2000+ that commercial systems cost. Then I saw a friend's Sadler 26 sporting a five-foot wooden fin on the stern, and asked how it worked.

I ended up buying the Sadler's windvane, which was slightly overpowered for the lighter boat, while the owners made a new one. It's a design by the late Bill Belcher, a New Zealand authority on self-steering gear (the details are in his book), and it was made in mahogany and marine ply by John Bennett, a retired carpenter. With the stern fittings, that included a stainless steel rail to replace the original safety wire, the whole lot came to just over £400. Unlike the normal type of windvane that has a rudder tab to provide the power, the force that's applied to the tiller comes directly from the plywood fin via a couple of kevlar lines run through pulleys.

The system isn't infallible – I wouldn't trust it with the wind more than 30° behind the beam for instance – but once the wind moves forward it holds probably as good a course as the tillerpilot. Setting it up involves balancing the windvane angle with the position of the counterweight on the fin and the sail trim, but once on track it doesn't require any fiddling with other than to counter wind shifts. Bill Belcher called the design the OGT – which stands for 'ocean-going tramway' – and so far my record is 45 miles on course without adjustment, and that in a moderate swell. It also came into its own when the tillerpilot gave out, holding course while motorsailing in light airs. No doubt a rudder-type windvane would do better, but at a fifth of the price I'm happy enough with this one.

✿ There's more information on Stan's round-Britain cruise and details of his book *Around the Island* (Avista Press 2007) at <http://homepages.nya-online.net>