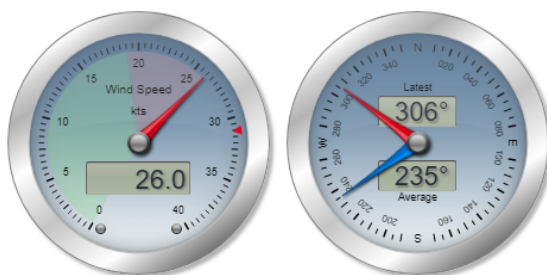


Sailing in strong winds

Sailing in strong winds can be **exhilarating** leaving you grinning from ear to ear! It can also be wet... very wet if you capsize 😞 !! Frustration can set in if you don't know how to take advantage of the gusts or keep ending up in irons. What follows are a few hints and tips on how to handle your boat while sailing in strong winds. (If you want to race in strong winds, this should give you a good start. Also check out the next in this series which will give you some specific racing tips.) As a prologue, how do you know how strong and variable the wind is?

If the wind speed is steady, up to say 25 mph, sailing is not so difficult, but at Frampton there will be two added components to consider – **gusts and turbulence**. Our weather station and the better weather Apps will show average wind speed as well as maximum gust speed. The gust speed is often about twice the average and the gusts will also change direction. There will also be times when the wind speed drops, which can be as difficult to handle as a sudden increase. Turbulence is the general unsteadiness of the wind, buffeting the boat and the crew, and making it more difficult to judge the effects of gusts.

On the live weather app on our FOSSC webpage [Live Weather – FOSSC](#), you can see dials showing average wind speed and wind direction. Click on the wind speed dial (on the website, not on the image below!) to get more information. As I write this, the wind speed is showing 26 knots, with an average over the last 10 minutes of 19 knots, and maximum gust of 31 knots. The wind direction is moving around a lot – average direction of 235 degrees, and current of 306 degrees. That's windy and shifty and most of our members would really think carefully before taking to the water!



Learn to read the lake. Stand on shore and look at the surface of the lake. You will see darker patches of water moving across the surface. These are gusts. How dark they are compared to the 'normal' colour of the water indicates how strong they are. Watch how they move in slightly different directions – see points 4, 5 & 6 below. If you can see waves on the water that's a sure sign of strong winds, especially 'white horses' as the top of the waves break. Next face the wind and feel the wind hitting your face – feel how it changes direction and strength. You can also check the Lake view webcam [Webcams – FOSSC](#). Do be aware that if the wind is moving away from you, the lake will appear calmer than it actually is!

At the end of this article is a table of wind strength in Beaufort scale, knots, miles per hour etc. If you've passed RYA level 2, sailing in a force 3 gusting to 4 will probably be OK but challenging – and ever so much fun!

Don't be a hero! Do consider how windy it is and how competent and confident you are before venturing out in strong winds, and wear appropriate clothing. Talk to others on shore about the conditions. Consider using a smaller sail or reefing – even the best sailors in the club change sail size or reef in some conditions (or even change class of boat). When you do go on the water, aim to keep just a bit more distance from the other boats and obstacles than in lighter winds so that if something unexpected happens, you have more time to react to avoid a collision.

So now you know how windy it is, and you have the right sail size, we will get on to some tips to manage the conditions and have a deliciously fabulous time on the water.

1. Generally speaking, **rig everything tightly**. This decreases the power in your sail and will therefore make your boat easier to handle. However, for low flat boats like lasers or toppers, this introduces two problems: 1 – you need to be more flexible to duck under the boom when tacking and gybing; 2 – if your kicker is on tight going downwind, there is a chance the end of the boom will hit the water and then drag and pull you over 😞. Best to ask more experienced sailors for advice about your particular boat as different classes sometimes need different set ups, or check class association websites / general internet / books.
2. The most important thing is to **continuously watch the wind!**
 - i. If you are going **upwind**, **look over your forward shoulder** – that’s where the wind will be coming from.
 - ii. If you are going **downwind**, **quickly glance behind you** from time to time so that you are prepared for the gusts which may hit you. The important word here is ‘glance’ – most of the time you should be looking forwards.
3. **Practice “heave-to”**. It is very confidence boosting to feel in a fairly stable position and to know that if you are in a muddle or feeling overpowered at any point you can revert to this – for instance, when sorting yourself out having righted the boat after a capsize or if a sudden squall comes. In a single sail boat, turn the boat across or slightly into wind and let the mainsheet loose. Then, by pulling the sheet in a bit (which will make your boat head into the wind a little) and pulling the tiller towards you thereby steering away from the wind, these two things will balance each other and you should be able to maintain a steady position to keep clear of the banks or obstacles. There is a good trick to heave to in two-sail boats by tacking but leaving the job on the wrong side.
4. The wind will be variable, in terms of direction and strength and you need to be ready for anything! Your boat is designed to work best when the mast is vertical so you want to **keep the boat as upright as possible (mast vertical)**. You will find that you need to be **more physical than usual** – ready to hike out (your gluteus maximus hooked over the edge of the boat) or come into the middle of the boat in a fraction of a second and quite frequently. If you are in a two-person boat, this is where the crew really comes into their own – especially **upwind, the crew’s job is to keep the boat flat** (upright) by moving their weight according to the wind. (Top tip for crews: going upwind, just pull the jib in as tightly as you can and leave it there while you balance the boat; going downwind play the jib according to the direction of the wind relative to the boat’s direction.)
5. Because the wind will change direction frequently, if you are close hauled it can be easy to become stuck in irons. If you are on a run, the boat may gybe unexpectedly. For these reasons, practice being on beam or broad reaches to begin with, progressing to close reaches when you are more comfortable. **Avoid runs in strong winds!** That unexpected gybe may damage you, or your boat, and chances are it will capsize you!
6. Watch out for **‘holes in the wind.’** This is when the wind strength suddenly drops for a short period. You will soon find them when you are going upwind as the boat will tip over towards you and it will feel like you are about to capsize backwards! Move your weight into the middle of the boat immediately!! It can also help to bear away a bit and hopefully the wind will catch your sail very soon and bring the boat back to vertical again (meantime, if you have been hiking out, your rear end may be in the water!).
7. **Gybing!** This is probably the most precarious manoeuvre in strong winds. **You need confidence and commitment – you can do it!**
 - a. **Check the wind** to make sure there is not an enormous black patch heading towards you (massive gust which may well overpower you at some point during the manoeuvre), and check you won’t be near anyone else. If necessary, slow down by letting your sails out to stay away from another boat, or to allow a massive gust to pass through.
 - b. It can really help to **de-power by pulling in your sail(s)** a good bit before you start the gybe. This means the boom has less of an angle to go through and there won’t be such a jolt when it swings over.
 - c. Make sure your **centreboard is halfway up**.

- d. If you are in a two-person boat, it can help if the **crew grabs hold of the kicker** and takes the power out of the sail as it goes across the boat.
- e. Swing the tiller over and make sure you **duck** to avoid the boom. Move across the boat **really quickly** to keep the hull flat.
- f. If you hesitate part way through the gybe, or change your mind, there is a good chance the hull, sail and wind won't be compatible with each other and you will go swimming. So once you start the gybe, keep going with it!
- g. If you really don't want to gybe, you can always do a 270-degree tack instead.

You've been out in strong winds and not capsized???? Massive well done!!!!



Beaufort number	Description	Wind speed	Sea conditions	Land conditions
0	Calm	< 1 knot < 1 mph < 2 km/h < 0.5 m/s	Sea like a mirror	Smoke rises vertically.
1	Light air	1–3 knots 1–3 mph 2–5 km/h 0.5–1.5 m/s	Ripples with appearance of scales are formed, without foam crests	Direction shown by smoke drift but not by wind vanes.
2	Light breeze	4–6 knots 4–7 mph 6–11 km/h 1.6–3.3 m/s	Small wavelets still short but more pronounced; crests have a glassy appearance but do not break	Wind felt on face; leaves rustle; wind vane moved by wind.
3	Gentle breeze	7–10 knots 8–12 mph 12–19 km/h 3.4–5.5 m/s	Large wavelets; crests begin to break; foam of glassy appearance; perhaps scattered white horses	Leaves and small twigs in constant motion; light flags extended.
4	Moderate breeze	11–16 knots 13–18 mph 20–28 km/h 5.5–7.9 m/s	Small waves becoming longer; fairly frequent white horses	Raises dust and loose paper; small branches moved.
5	Fresh breeze	17–21 knots 19–24 mph 29–38 km/h 8–10.7 m/s	Moderate waves taking a more pronounced long form; many white horses are formed; chance of some spray	Small trees in leaf begin to sway; crested wavelets form on inland waters.
6	Strong breeze	22–27 knots	Large waves begin to form; the white foam crests are more extensive everywhere; probably some spray	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.

