



Wind on the course

What is the wind pattern on the course?

- Steady – Constant wind direction and constant velocity. A persistent steady breeze is unusual given that most of our race venues are inland waterways.
- Oscillating – Wind direction varies either side of a mean. Sometimes the oscillations are fairly regular and predictable.
- Bending – Wind direction shifts progressively further as you move up the course.
- Gusting – Increased wind velocity for short periods of time and often only effecting part of the course

Wind Indicators

Generally there are three sources of useful information:

- Weather forecasts – Get a forecast for the sailing area before you head to the sailing venue. The key things to look for are wind strength and direction, gusts and temperature. I use [Windfinder](#) which gives me a breakdown of the weather through the day in three hourly segments.
- Local knowledge – If you know the venue, you will have an idea of what conditions to expect based on the weather forecast. If you don't know the venue, ask local sailors for their ideas on what to expect.
- Observations – This is the most important source of weather information. Before you launch you can observe wind patterns on the water, look at flags, or the effect of wind on trees or other boats sailing. But the most useful and detailed information on what the wind is doing will be from your observations while sailing on the course.

Temperature and Wind Strength

Cool air is more dense than warm air and being denser, cool air packs a bigger punch. You might easily carry your biggest rig in 12kts during a summer heat wave, but find the same rig over-powered by 12kts in the middle of winter.

Wind Effect on the Water

When you are looking for wind velocity, the appearance of the water surface is key. In general, darker water means more wind because of the way wind ripples reflect light from the sky. However:

- Glare from the sun can sometimes make more wind look like less wind, and vice versa.
- Sometimes what looks like more wind is really the effects of current.
- Ripple-less water does not always mean no wind.

In light conditions, the effects of wind shear may result in zero wind velocity at the surface, but increasing velocity higher up the mast.

Shifts in direction are more difficult to pick up from the water and you have to rely on clues like the angle of other boats sailing on that part of the course.

Rig Choice

You've probably arrived at the race venue with a rig choice based on forecasts and your local knowledge. Your rig will be the biggest you think the boat can handle in the conditions and already adjusted to your baseline settings to get you into on-water tuning mode as quickly as possible. While observing conditions at the venue, you need to assess whether you should change up or down a rig size. Check what rigs other boats are carrying and how they're handling conditions. Be prepared to change at the venue and learn to do it efficiently.

Wind Pattern and Race Strategy

Understanding the wind pattern on the course is the number one factor when developing your race strategy.

Once on the water, spend a bit of time at the top and bottom marks and out at each side of the course. While sailing around, try and form a view of what the wind is doing. Look for both changes in wind direction and changes in velocity. At this point, you're trying to determine any persistent pattern across the course, not so much the short term variations.

Ask yourself the following questions:

1. Is the wind strength light, moderate, or strong for the rig you have chosen? Will you have control downwind in the gusts?
2. How much is the wind shifting?
3. Is the wind bending up the course – which way?
4. Which is the long tack from the start line and is it the same from the leeward mark?
5. Where on the course is the greater wind pressure?

Once you have an idea of the wind pattern, you can start to form a race strategy. You must always assess the relative importance of wind versus other strategic factors, but for now, just consider wind.

Which is the better side of the course? Will you go left for a favourable shift or right for better pressure? If unsure, do you favour the middle to reduce risk?

A good guideline is that wind velocity is usually more important in lighter air while shifts are more critical in stronger breezes. Once you have your race strategy decided, it's time to look at the start. Remember, your starting tactics should support your race strategy.

When You Can't See the Pattern

Sometimes, despite sailing all over the course and asking all the questions, no discernible pattern is evident. It can be particularly difficult to find a pattern if the wind is light and very shifty. If this is the case, the best you can do is to plan your race according to the rules of thumb (see *Racing Rules of Thumb*). When you can't see a pattern,

your race strategy may be as simple as:

- Get a clean start
- Sail in clear air
- Keep an eye out for the wind shifts
- Don't get pushed out to the sides.

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