Dealing with the Wind

Anchor Points (Coaching Visual Model)

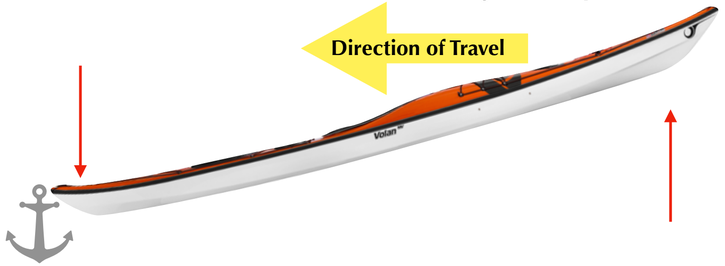
Sea kayaks naturally turn into the wind because the bow has greater lateral resistance than the stern. The bow runs in clean water and grips more, while the stern sits in turbulent wake and slips more easily. The wind usually pushes from behind the centre of the kayak, nudging the stern downwind and turning the bow upwind. This is why sea kayaks weathercock.

For coaching, it can be helpful to imagine the bow or stern acting as an anchor point depending on the stroke you use.

- Forward strokes load the bow and make the front of the kayak feel planted.
- Reverse strokes load the stern and create the same planted feeling at the back.

This mental model helps paddlers understand why certain strokes, trims, and edges are more effective when turning into or away from the wind.

Forwards momentum drives the bow down. Creating a 'anchor point' at the bow.



Backwards momentum drives the stern down. Creating a 'anchor point' at the stern.

Into the Wind

The bow is driven down into the wind and the kayak holds position into the wind. Paddlers typically feel comfortable / stable in this position.

- Skeg - Up
- Trim - Forward - heavier kit could be packed in the bow or using the body to trim by leaning forwards.
- Reduce Wind Shear - Consider lower angle paddling strokes or leaning forwards. A higher feather angle can reduce the effect of the wind on your blade ie 60°.
- Conserve Energy - Don't over grip on paddle or fight gusts. Consider easing off with gusts and finding a constant paddling rhythm you can maintain to get to your destination without losing progress or burning out.
- Slip Stream - Use other paddlers for wind protection. Take in turns as lead paddler.

Across the Wind

The bow is driven down under forward momentum and the kayak weather cocks turning into the wind on the right. This can feel tiring or frustrating for some paddlers.

- Skeg - Half Way
- Trim - Balanced (try to keep an even trim)
- Paddle - Consider off-setting the paddle by moving both your hands down the paddle shaft creating more of a sweep stroke on the windward side and a lighter forwards stroke on the other. This allows you to keep some rhythm instead of getting pumped or frustrated with constantly paddling on one side.
- Lean into the wind - Consider edging* or leaning slightly into the wind, this reduces the surface area for the wind to push and adds a slight turn to the left balancing out the wind trying to turn the kayak to the right. How much you edge or lean will depend on your kayak and the strength of the wind.
- For shorter crossings or in strong winds consider ferry gliding.

*Edging can be tiring to hold for long periods of time - consider leaning into the wind as a more comfortable option for longer journeys across the wind.

Down Wind

The wind finds the lifted stern first and tries to turn the kayak around onto our pivot point at the bow. This can be uncomfortable for less experienced paddlers as the kayak is more difficult to maintain a constant direction and they are unable to watch the conditions coming towards them.

- Skeg - Down
- Trim - Backwards - heavier kit could be packed in the stern or using the body to trim by leaning back*. This reduces how much the bow engages with the water and helps straight-line control.
- Stern Rudder - Consider using the stern rudder to steer from the stern, creating more connection to the water at the back of the kayak. Leaving the paddle in the stern at the end of a forwards stroke as a 'trailing blade' can help with this.
- Paddle strokes - Consider shorter, more central stokes that help reduce unwanted turns.
- Consider increasing your surface area or wind sheer with your paddle to 'sail' down wind ie 0° feather. This saves energy and allows the wind to do the work.
- Focus on small corrections before they become big corrections that impact your speed or add to fatigue.

*In theory, leaning back should help, however we don't want to cause an injury in the process.

Turning in the Wind

Turning into the Wind

Forwards sweep strokes load the bow and make it the pivot point for turning into the wind.

Using the same idea of anchor points can help to increase our performance when turning in the wind. Driving the bow down by leaning forward with our body or by using forward strokes or forward sweep stokes can help to turn the bow into the wind.

*We may also choose to perform sweep strokes on both sides to bring the kayak around but one stroke will be more effective / efficient depending on how we are trying to turn in relation to the wind.

Turning down Wind

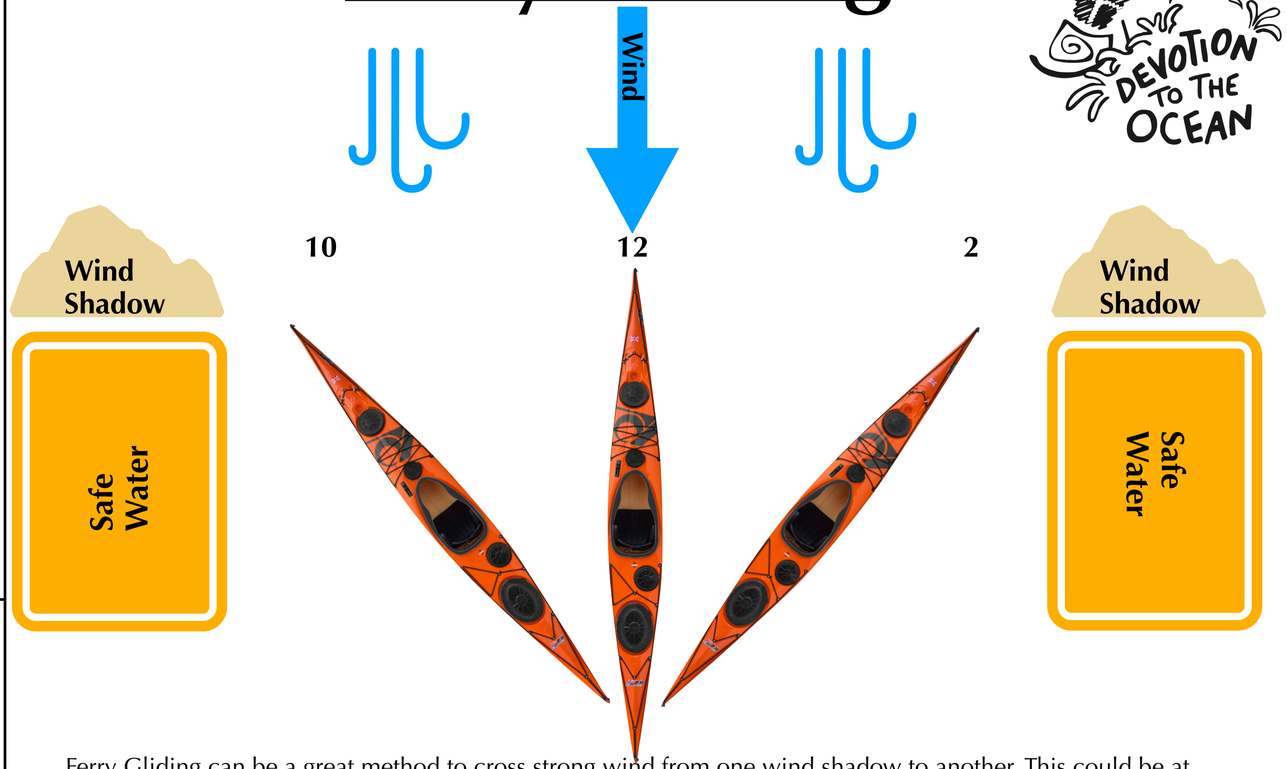
Reverse sweep strokes load the stern and make it the pivot point t for turning downwind.

Driving the stern down by leaning back with our body or by using backwards strokes or reverse sweep strokes can help to turn the stern into the wind.

Exercise - Try it for yourself: On a windy day start with your stern pointing directly into the wind. First try to turn the kayak 180 ° using only forwards sweep strokes on one side, count how many strokes it takes to turn 180 °. Next reset so your stern is pointing directly into wind again and try to turn the kayak 180 ° with reverse sweep strokes only. Count how many strokes it takes and notice which side of the kayak feels more planted during each set.

Its' a great skill to be able to think about 'loading' the kayaks bow or stern with our stroke selection.

Ferry Gliding



Ferry Gliding can be a great method to cross strong wind from one wind shadow to another. This could be at the entrance to an estuary where the paddler is exposed to stronger wind but wishes the cross to the other side without loosing ground or making forwards progress into the estuary.

Think of your kayak direction like a clock face. At 12 I'm pointing into the wind holding position. If I set my bow to 11 or 10; depending on the strength of the wind, and hold that position the kayak will begin to move to the left. If I set my bow to 1 or 2; depending on the strength of the wind, and hold that position the kayak will begin to move to the right. The same would work in reverse with the stern pointing into the wind, however this would be more challenging!

A key factor of ferry gliding is that we just want to maintain our direction and use minimal energy. We don't want to work harder and make forwards progress into the wind. We also want to avoid being pushed backwards.

Paddlers will typically find that ferry gliding is more comfortable than moving directly across the wind as it allows you to look into the conditions and maintain better control of the bow. If moving directly across the wind it's likely we will also be pushed down wind at the same time. It all depends on the wind strength, our skill level and the distance of the crossing when making our selection of which method is most appropriate.