

A scenic landscape at sunset. In the foreground, there's a grassy hill with some rocks. A red windsock is attached to a pole on the right side of the hill. In the background, there's a body of water, possibly a bay or a lake, with mountains in the distance. The sun is low on the horizon, creating a warm, golden glow across the sky and water. The sky is filled with soft, white clouds.

# YOU CAN'T BUY A WIND CALL.



You earn it.  
Then you trust it.  
Then it's yours.

#FirstRoundEffect



**Cap Coast Gunsmithing** • Safety first. Data always. Ego never.

CAP COAST GUNSMITHING • YEPPPOON, QLD

*A First Round Effect knowledge guide*

## Why this guide exists

I was at a 100 metre competition the other day. Fairly inexperienced field. A slight breeze came up, nothing dramatic, the sort of air you feel on your face and then forget, and it became a topic of conversation. Blokes worrying about it. Talking about it. Treating it like the main problem on the firing point.

At a hundred metres, with a centre-fire rifle and half-decent ammo, that breeze was barely moving anything that mattered. The groups were being decided by position, trigger, natural point of aim, and whether the zero was honest, not by a light puff across the mound.

That conversation is exactly why this guide exists.

Wind is the skill gear can't buy. It is also the variable that gets over-blamed at short range and under-respected at distance. Shooters with expensive rifles will tell you, honestly, that wind still beats them. The forums say the same thing every week: take a class, learn to read it, stop guessing.

This is the plain-English map: what wind actually does, why near wind matters most, how to estimate speed without a meter, how the clock turns direction into a useful number, and a simple four-step call you can run every shot, W.I.N.D.

Read it once and you will know more about wind than most people at your club. Then take it to a supervised range and prove it on paper.

*Safety first. Data always. Ego never.*

# Gravity is free. Wind is the call.

Bullet drop is honest. For a given range, load, and air density, drop is the same today as it was last month. Your ballistic solver hands you elevation almost for free once your inputs are true.

Wind is different. It changes speed and direction between the muzzle and the target, often more than once. Two shooters can share the same rifle, the same dope, and the same zero, and only one hits. The difference is almost always the wind call.

That is not meant to sound mystical. It is meant to put your attention in the right place. At short range (100 m, even 200 m), a light breeze is usually a distraction, not a destiny. At 600 m and beyond, the same breeze becomes a real miss. Time of flight is the amplifier: the longer the bullet is in the air, the more every sideways nudge stacks up.

**The one-line version: stop treating every flutter as a crisis at 100 m, and stop treating wind as optional past 400 m. Scale your respect to the distance.**

*Read the whole course, not just your muzzle. Capricorn Coast.*



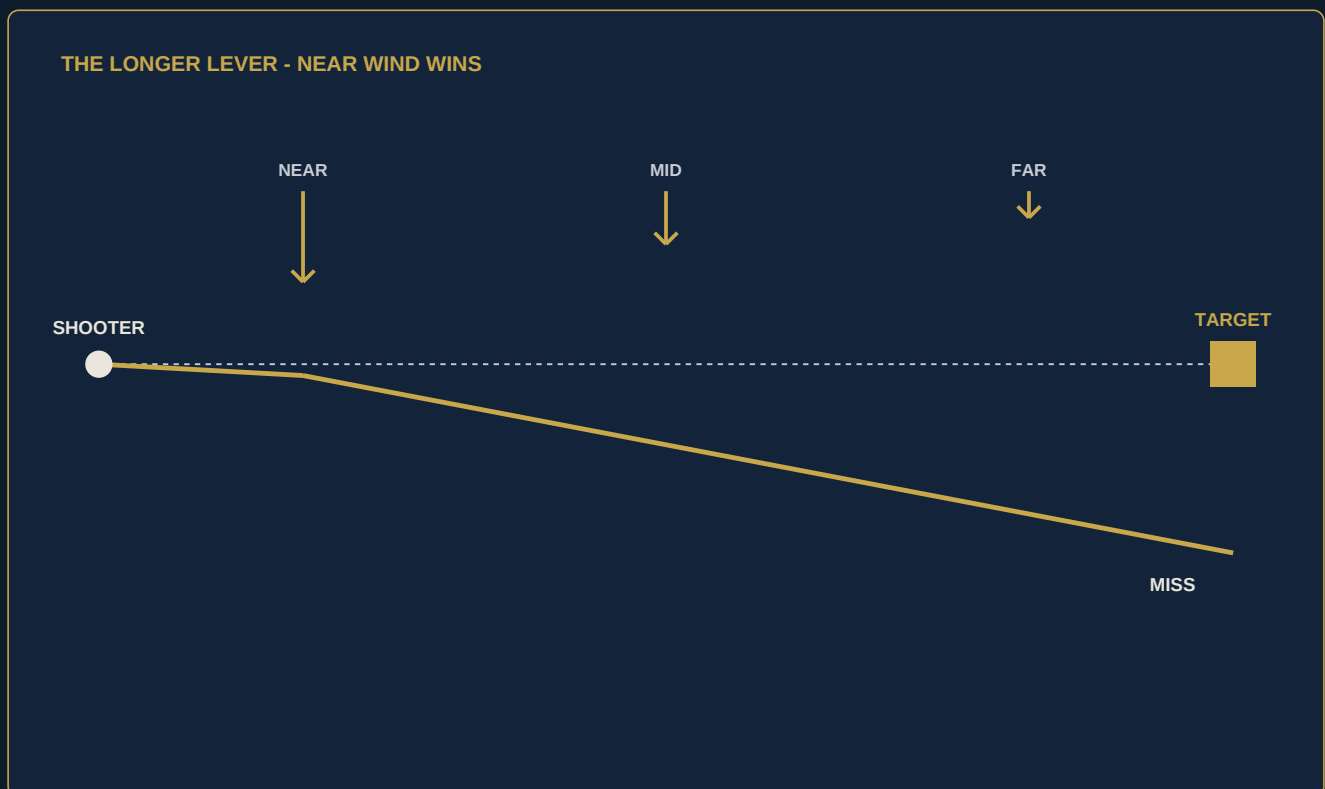
## What wind does (and why near wind wins)

A crosswind pushes the bullet sideways for the whole flight. The effect grows with time of flight, which is why drift balloons at distance far faster than most people's intuition expects.

Here is the part many shooters miss: wind close to the muzzle matters most.

When air near you tips the bullet onto a slightly new heading early, that small deflection has the whole remaining flight to grow. Wind at the target only has a short time left to act. So when you read a field of flags, weight the ones nearest you. A perfect read on the target flag and a wrong read at the firing point is a common way to miss and then blame "gusts."

Headwinds and tailwinds (wind straight down the range toward you or away from you) barely push the bullet sideways. They change time of flight a little, and therefore drop a little, but they are not the main event for horizontal misses. Crosswind is the thief.





# The W.I.N.D. sequence

Guessing is not a method. Every solid wind call answers the same four questions, in the same order, the four cards below. We call the sequence W.I.N.D.

Same order, every shot. Each step gets its own page next; the complexity lives in the practice, not in the checklist.

## *From the bench*

If you only steal one thing from this guide, steal the habit of saying the four steps out loud before you press. Watch. Identify. Number. Dial. It stops the brain from skipping straight to a hopeful hold.

**W**

**Watch**

from + strength

**I**

**Identify**

clock value

**N**

**Number**

speed x value

**D**

**Dial / hold**

mils, into wind

## W: Watch - direction and strength

### Direction

Look at the whole field, not one flag: range flags and windsocks, lay of grass and crop, dust or smoke drift, tree-line lean, wind on your face, and mirage through the scope or spotter.

Weight indicators nearest you. Then mid-range. Then the target. If they disagree, believe the near air more for the first half of the call, and still note what the far end is doing.

### Strength (metric, no meter required)

Calm (0-3 km/h): smoke near-vertical; mirage boils straight up.

Light (~5-8 km/h): felt on face; leaves rustle; flags just stir.

Gentle / moderate (~10-15 km/h): dust and loose grass lift; small branches move; flags about 45 degrees.

Fresh (~20 km/h): small trees sway; flags fly straight out; mirage hard to read.

Strong (30+ km/h): large branches heave; precise shooting gets genuinely hard.

A meter at the firing point is useful. It is not the whole story. It reads your shoulder. The bullet flies through air you have not sampled. Use the meter as one indicator among many, then confirm on steel.

*Read the whole field, weight the indicators nearest you.*



## Mirage: the wind meter you already own

Mirage is heat shimmer carried by the wind. On a Central Queensland day it is not an edge case, it is Tuesday. Most shooters curse it and go home. You can read it.

Boil straight up: calm, or head/tail wind. Little useful crosswind.

Leans and runs sideways: crosswind. Faster, flatter run means stronger wind.

Focus just short of the target (parallax or spotter focus) and the shimmer pops into view.

The trap: a boiling mirage often means a lull. Shooters rush the shot in the boil, then the breeze returns and the impact walks. Wait for a condition you understand, or accept a bracket and shoot a baseline.

Reading mirage under pressure, telling a lull from a genuine let-up, and timing the shot to it, is a skill of its own, and it is where a good deal of the course's range time goes.

*Mirage over sun-baked grass, heat carried by the wind.*



# The clock method

Imagine you are at the centre of a clock face, firing toward 12. The clock turns a messy direction into a simple fraction of the wind that actually counts.

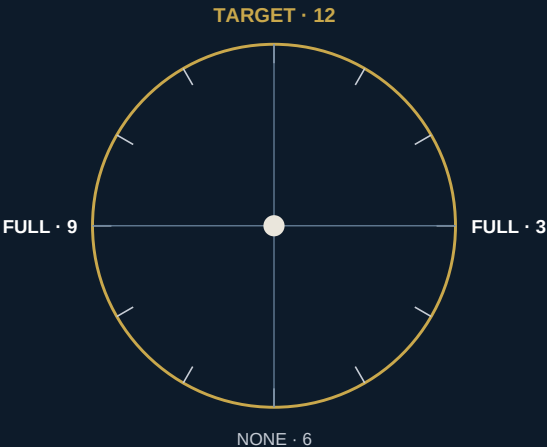
Effective crosswind = measured speed x value factor.

| Wind from       | Value       | Meaning                       |
|-----------------|-------------|-------------------------------|
| 3 or 9 o'clock  | Full (1.0)  | Pure crosswind, maximum push  |
| 12 or 6 o'clock | None (0)    | Head or tail, almost no drift |
| 1, 5, 7, 11     | ~Half (0.5) | Shallow diagonals             |
| 2, 4, 8, 10     | ~0.9        | Steep diagonals, nearly full  |

Simple starter rule if the refined table is too much: full, half, or none. That alone puts you ahead of "feels a bit breezy."

**Worked example.** You read 16 km/h from 2 o'clock (factor ~0.9). Effective wind is about 14 km/h. That single number is what you feed the solver or your personal wind card.

Always correct into the wind. Wind blowing left to right pushes the bullet right, so you hold or dial left (upwind). Wrong-way holds are free misses.





## N then D: number it, dial or hold

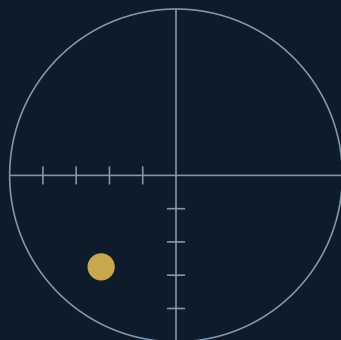
Combine speed and value into effective crosswind. That is the N.

Then turn it into mils. Best default: enter wind into your ballistic solver and take the mil hold it returns. Or use your personal Wind Number card (next page) and scale it.

Always correct into the wind. Wind from the left (blowing toward the right) pushes the bullet right, hold or dial left. Wind from the right, hold or dial right.

### Dial vs hold

Dial when you have time and a single known distance, precise, reticle centre stays clean. Hold when targets come quick or the wind is busy. A common, sensible default: dial elevation, hold wind. Pick the method for the shot, not the other way around.



hold into the wind

# Your Wind Number

Generic rules of thumb ("about a minute per ten") get you close and let you down at the edges. What actually ends the guessing is a card trued to your rifle, your load, and the ranges you shoot: your personal Wind Number, how much your bullet drifts, in mils, per 10 km/h of full-value wind, at each distance.

Own that number and every call becomes arithmetic you trust: effective wind, divided by ten, times your number at that range. Half the wind, half the hold. No theatre.

**The idea is simple. A number you would bet a cold-bore shot on is not.**

It has to be built from real solver data, then trued against your own impacts, call versus hole, logged and corrected, until the card and the steel agree. Building it, truing it, and drilling it until it is instinct is the practical spine of the course. The free CCG-LR app does the maths and holds your DOPE; the course teaches you to read the field well enough to trust the number.

## *From the bench*

A borrowed wind rule is a stranger's guess. Your Wind Number, trued to your own rifle, is the difference between hoping and knowing. Building it properly is what Module 12 walks you through; this guide gets you to the doorway.

*Your Wind Number lives here, trued against your own impacts.*



# When the wind won't sit still

Switching or "fishtailing" wind is normal near the coast and in broken terrain. Chasing every gust is how you empty a mag and learn nothing.

Bracket it. Watch long enough to note the minimum and maximum you actually see (for example 8-18 km/h). Choose a baseline, often the condition that appears most, or the middle of the bracket.

Either wait for the baseline and shoot when it returns, or hold the midpoint and accept a smaller worst-case miss than if you guessed extremes.

The most honest wind call is a window, not a fantasy single number: "Twelve to eighteen, favouring fifteen." Say it out loud. Then commit.

## *From the bench*

Bracketing on paper is easy. Doing it from a real field position, on the clock, while the coast fishtails on you, is the hard part, and it only comes from supervised reps with feedback. That range work is what the course is built around.

# Local notes, mistakes, and a drill

## Coastal and terrain

On the Capricorn Coast and through CQ you will meet sea breezes that build through the day, fishtailing switches, gullies and tree lines that funnel air mid-range, and heavy mirage in humidity, a gift if you learn to read it. The wind in a valley is rarely the wind on the bench. Read the whole course, not just your muzzle.

And back to the 100 m story: if you are still learning, a light breeze at short range is a chance to practice the sequence without the miss costing much. Use easy conditions to rehearse W.I.N.D. so that when the distance grows, the process is already automatic.

## The expensive four mistakes

1. Watching only the target flag, and ignoring near wind (the longer lever).
2. Holding the wrong way. Always into the wind.
3. Chasing every gust, instead of bracketing and shooting a baseline.
4. Trusting a generic formula over data from your own rifle, load, and solver.

## Supervised range drill

Pick a baseline condition. Fire five. Log the call and the result. Wait for a clearly different condition. Hold for the new value. Fire five. Compare holes to calls. Adjust your Wind Number card. Repeat until boredom sets in, boredom means the skill is forming.

No unsupervised live fire from a PDF. This guide teaches judgement; the range proves it.

# Where to go from here

You now have the map:

Wind scales with time of flight, respect distance, don't panic at 100 m. Near wind matters most. W.I.N.D. every shot. Clock value to effective wind to mils into the wind. Bracket switching air; call a window, not a fiction.

**The method is simple. The skill is not.**

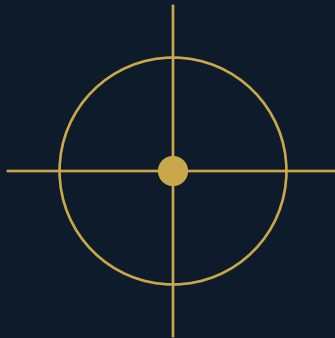
Reading wind reliably comes from reps, your own data, and honest feedback, call versus impact, logged and corrected, in a deliberate order. That is the part a guide can't hand you and a gadget can't buy.

First Round Effect, the CCG Long Range Programme, is that structured path: atmospherics, wind, DOPE, solvers, ethics and Australian conditions across 25 modules, with the free CCG-LR app built around the same method so your Wind Number and your DOPE travel with you into the field.

Course: [capcoastgunsmithing.com.au/first-round-effect](https://capcoastgunsmithing.com.au/first-round-effect)

More free guides: [capcoastgunsmithing.com.au/knowledge](https://capcoastgunsmithing.com.au/knowledge)

App: search CCG-LR on the App Store



## FIRST ROUND EFFECT

[capcoastgunsmithing.com.au/first-round-effect](https://capcoastgunsmithing.com.au/first-round-effect)

*Safety first. Data always. Ego never.*

This guide is general education for lawful, supervised shooting. It does not replace range officer direction, club rules, or your state's firearms laws. Apply wind calls only where you are legally entitled to shoot, with a safe backstop, and within your honest capability.