ROYAL HARWICH YACHT CLUB
WOOLVERSTONE

From Copilot- AI—

Here's the **Royal Harwich Yacht Club–specific** guide to how sea breezes behave right at Woolverstone on the River Orwell. This spot has one of the **most complex and fascinating** sea-breeze patterns on the East Coast because it sits *inland* on a tidal river but is still strongly influenced by the North Sea.

What happens, **why it happens**, and **how to predict it**.

🌊 Why sea breezes behave differently at RHYC

Three local features shape the breeze at Woolverstone:

1. The Orwell is a long, narrow, heat-absorbing valley

The land on both sides warms quickly → strong thermal pull inland.

2. The river bends SW–NE

This channels the sea breeze and often **rotates** it as it travels upriver.

3. The sea breeze must pass Landguard → Felixstowe → Levington before reaching you

By the time it arrives at RHYC, it has:

- Slowed
- Turned
- Mixed with the gradient wind

This is why the breeze at RHYC often feels **later, weaker, and more variable** than at Harwich Harbour or Shotley.

🌬️ The three sea-breeze phases at RHYC

1. The "arrival signal" at Landguard & Shotley

Before you feel anything at Woolverstone, the sea breeze must:

- Hit **Landguard Point**
- Push into **Harwich Harbour**
- Move up the **Orwell mouth** past Levington

This usually happens **1–2 hours before** it reaches RHYC.

Your clue: If Shotley Gate suddenly swings SE and drops 3–5°C, the breeze is on its way.

2. The "Orwell funnel breeze"

Once the sea breeze enters the Orwell, it accelerates and rotates:

- At the mouth: **E–ESE**
- At Levington: **SE**
- At RHYC: **SSE–S**

This rotation is caused by:

- The river's alignment
- Friction from the valley sides
- Interaction with the SW gradient wind

This is why RHYC often gets a **southerly sea breeze**, even when the coast is easterly.

3. The "late-day reinforcement"

Between **2–5 pm**, the land around Woolverstone is at peak temperature.

This can:

- Strengthen the sea breeze by 3–6 knots
- Pull it further upriver
- Create gusty, shifty conditions on the moorings and racecourse

Even if the breeze is weak at noon, it can become **surprisingly punchy** by mid-afternoon.

🧭 **Will the sea breeze reach RHYC or stall at Levington?**

Use this simple rule:

If the gradient wind is SW < 10 knots → the sea breeze WILL reach RHYC.

If the gradient wind is SW > 14 knots → it will stall at Levington or Shotley.

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More detail:

It WILL reach RHYC when:

- Morning winds are **light** (0–8 knots)
- Skies are **clear**
- Land is **4°C+ warmer** than the sea
- The breeze has already reached Shotley/Felixstowe
- Windy shows the "curl" pushing into the Orwell

It will STALL before RHYC when:

- SW wind stays above 12–15 knots
- Cloud reduces land heating
- The sea breeze is weak or shallow
- The front stops at Levington Marina for >30 minutes

🔍 **How to spot the sea-breeze front approaching RHYC (Windy method)**

Look for:

1. The "Orwell arrow rotation"

Wind arrows rotate from:

- SW → SSW → S → SSE

This is the classic sign the sea breeze is pushing upriver.

2. The calm patch

A zone of **very light winds** just ahead of the front.

3. The temperature drop

Usually 2–4°C as the front passes.

4. The Levington test

If Levington swings SE/SSE, RHYC will follow **within 20–40 minutes**.

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🎯 What it feels like on the water at RHYC

When the sea breeze arrives, expect:

- A sudden lull
- A sharp wind shift
- A new breeze filling from the **south or SSE**
- Gusts funnelling along the river
- Patchy pressure near the Woolverstone bend

Racing at RHYC often hinges on **spotting the new breeze first**.