

BREEZE

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Foiler Alert on the Waitemata



Words and Photos
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With the advent of hard-wing foiling catamarans in 2013, the customary America's Cup trickle-down effect was expected to be minimal. And, generally speaking, so it has proved – except for small pockets of activity in which adventurous souls venture into the twilight zone where sailing and flying intersect.

In Auckland, two SL33 catamarans used as trial horses and experimental platforms by Emirates Team New Zealand have found their way into the regular harbour racing fleet, while a third based

on the SL33 has also joined the fun. Not surprisingly, the three fleet-footed cats have attracted some stellar sailors.

Volvo Ocean Race winner and America's Cup sailor Mike Sanderson is in partnership with former 470 Olympic campaigner Craig Greenwood (plus a third partner) in one.

America's Cup designer and sailor Mike Drummond is a half owner with Bruce Curson of the other ETNZ machine, while John Kensington, an accomplished amateur racer, owns *Foiled*. This is a customised version, with a bigger rig, longer prod, transom-hung rudders and hiking racks, a-la 18ft skiffs.

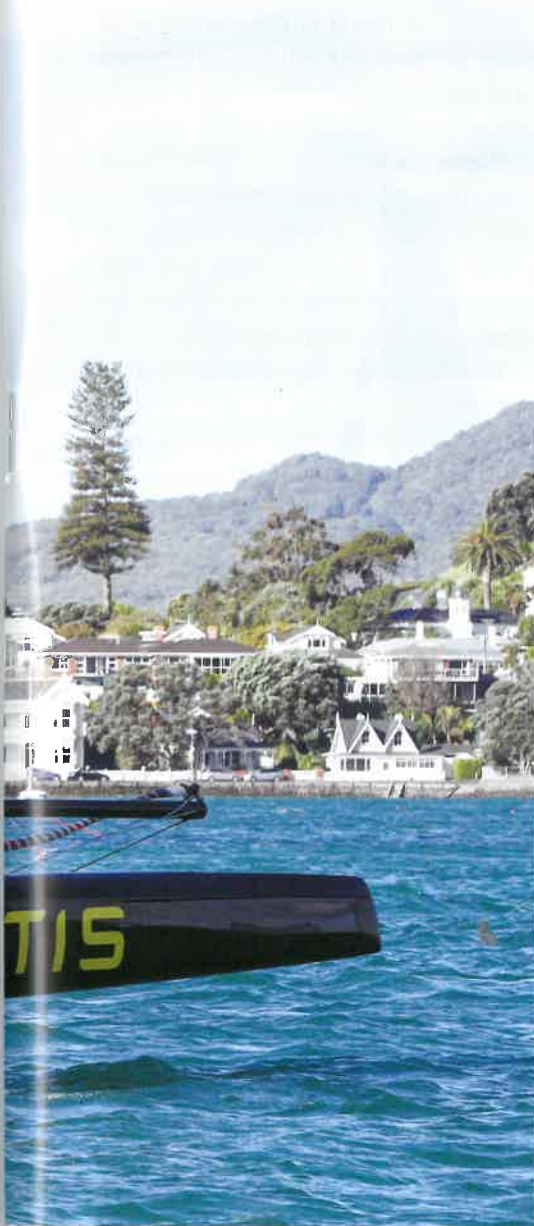
By virtue of their experimental history, the two ex-ETNZ yachts were set up more for speed testing than racing, requiring some

deck layout and system modifications. "We have had to adapt them for harbour racing and we still have some changes to make," says Drummond, "but we are not going to spend a lot of time or money on that. For one thing, the booms are very low, making getting from one side to the other quite restrictive. They are minor things."

Both the ETNZ boats have hydraulic foil and sail trim controls, while *Foiled* has a manual block and tackle system. The foils on all the boats feature C-curves with winglets, with Kensington's probably a generation later than the other two. "Ours were designed for speed, not stability," says Drummond. "We have our moments," he adds with dry humour.

Drummond has left his prod unchanged

'You think you are going fast and then you get hit by a gust. Suddenly, it is a case of Holy Smoke, where is this going to end?' – Mike Sanderson



kind of thought on a race track. Thirty-plus knots on a 30ft sailboat is a serious adrenalin rush. The best speed we have seen is 37 knots."

"It's exhilarating," says John Kensington. After a pause, he admits with a laugh that "frightening" has occasionally been an appropriate description as well. Drummond agrees with exhilarating and characterises the sailing as "challenging and fun".

On paper, Kensington says *Foiled* is probably 2-3 boatlengths faster on an upwind leg and 3-4 on a downwind leg. It also has the edge in light airs.

But, he says the slightest mistake very quickly wipes out any theoretical advantage.

All three owners attest that the learning curve is steep and the harbour is a less-than-ideal schoolroom with its orientation inclined towards reaching conditions. With these boats, that makes for a small sweet-spot, hard to find and even harder to maintain. Compounding the problem, wind funnelling through office canyons and around local headlands is notoriously gusty and shifty, which makes the boats as skittish as bucking broncos.

"You just don't get a decent enough runway," says Kensington. "Once you get up on the foils, you only need a fairly small

wind shift and next thing you are turned 90° and hurtling towards the Naval Base with very little time to get down off the foils and slow down."

Like the AC72s, foil control is achieved with the main boards. The rudders are adjustable at the dock, but it is a set-and-forget situation. All three boats tend to sail with five on board and Kensington says downwind the foil trimmer is fully engaged.

Their set up on *Foiled* is that the helmsman and the mainsheet trimmer share duties on the traveller. The headsail trimmer handles the jib upwind and A-sails downwind, while the bowman and foil trimmer share the board up and down duties in tacks and gybes and then focus on their own tasks for the straightline stuff.

Crew co-ordination is critical, says Drummond. "All the crew contribute to performance, which makes it fun for everyone." Kensington says they have a core group of seven and sail with five. Bring on anybody unpracticed in the particular dark arts of these speed machines and performance suffers immediately.

Drummond has done some two-handed winter sailing, out in more open water with more stable winds. "We got to settle down for longer periods," he says. He even

within the overall length limit imposed by the America's Cup surrogate rules, while Sanderson has extended his by 1m. All the boats use soft sails.

The ETNZ boats have had some surgery in their past, which probably added some weight. *Foiled* is lighter and, by virtue of the bigger sail area, more powerful, but Kensington confesses this is sometimes a liability. Nobody has complained much about lacking power.

"You think you are going fast and then you get hit by a gust," says Mike Sanderson. "Suddenly, it is a case of holy smoke, where is this going to end?"

"There have been times where I have been thinking I hope this doesn't get any faster – and it's not often you have that



Castaway crew wave as a spotter plane circles overhead

did a light-air race single-handed with no trouble.

The boats can be made to foil in about 10-12 knots of breeze, but Kensington says if it is shifty or gusty, it is often better to semi-foil, staying low and letting the foils assist rather than lifting right out.

Take-off procedure is to rake the top of the board forward at first, which lowers the bow and extends waterline length to build maximum speed. Then you trim the top of the board back to lift onto the foil. Once flying, neutralise trim to reduce drag. To control height, you might raise or lower the board. You want to be just flying – not too high out of the water.

"The physics of sailing these boats is quite complex," says Drummond. "There is a lot going on beyond the usual sail and trim variations. It is multi-dimensional. There is a lot to learn, which means we look forward to sailing every time. It is good fun."

Sanderson confirms the technical complexity and notes that the GC32s in Europe are much more user-friendly.

To keep the boats free of growth

and avoid the weight and hassle of anti-fouling, they are dry-sailed in custom pens, supported by large tanks. These can be flooded to sink the platforms down and allow the boats in and out. Like a floating dock, the tanks are then drained and become buoyant, lifting the boats out of the water.

The process takes about 30 minutes each way, during which time the boats are rigged ready for racing, or de-rigged for storing. The Drummond boat and Foiled rely on outboards to manoeuvre in and out of the marina, while the Sanderson syndicate use a RIB to tow in and out.

Stowing an outboard at the stern quickly revealed how weight sensitive these boats are. "Balance is critical," says Kensington. Drummond and Curson balanced their outboard by wrapping lead around the prod. When that showed a significant effect on performance, Kensington followed suit by suspending his anchor in a bag from the prod.

This inevitably brings to mind lead in the kingposts of the AC45s. John Kensington laughs. "This is very different," he says.

"We are not racing in class and it is all out in the open. But you can certainly see what kind of impact that could make on performance."

Neither skulduggery nor technological arms races – typically characteristic of America's Cup campaigns – have any part in this trio of foiling cats. It is more about fast, exhilarating racing that gets the adrenalin flowing and pulses racing.

Their ranks are not expected to show dramatic growth, if any at all. It is pretty rarefied stuff and probably not for the faint-hearted, although Drummond reckons the boats look much more intimidating from afar than from on board.

"In 12 months of sailing, sometimes in more than 30 knots of wind, we have dumped the main about five times – and we probably really only needed to about three times. People watching us seem to think we are idiots, but it is not as bad as it looks. It is a lot of fun."



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