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"...a fast hull, a fast sail plan..."

SPEED *is the* ANSWER

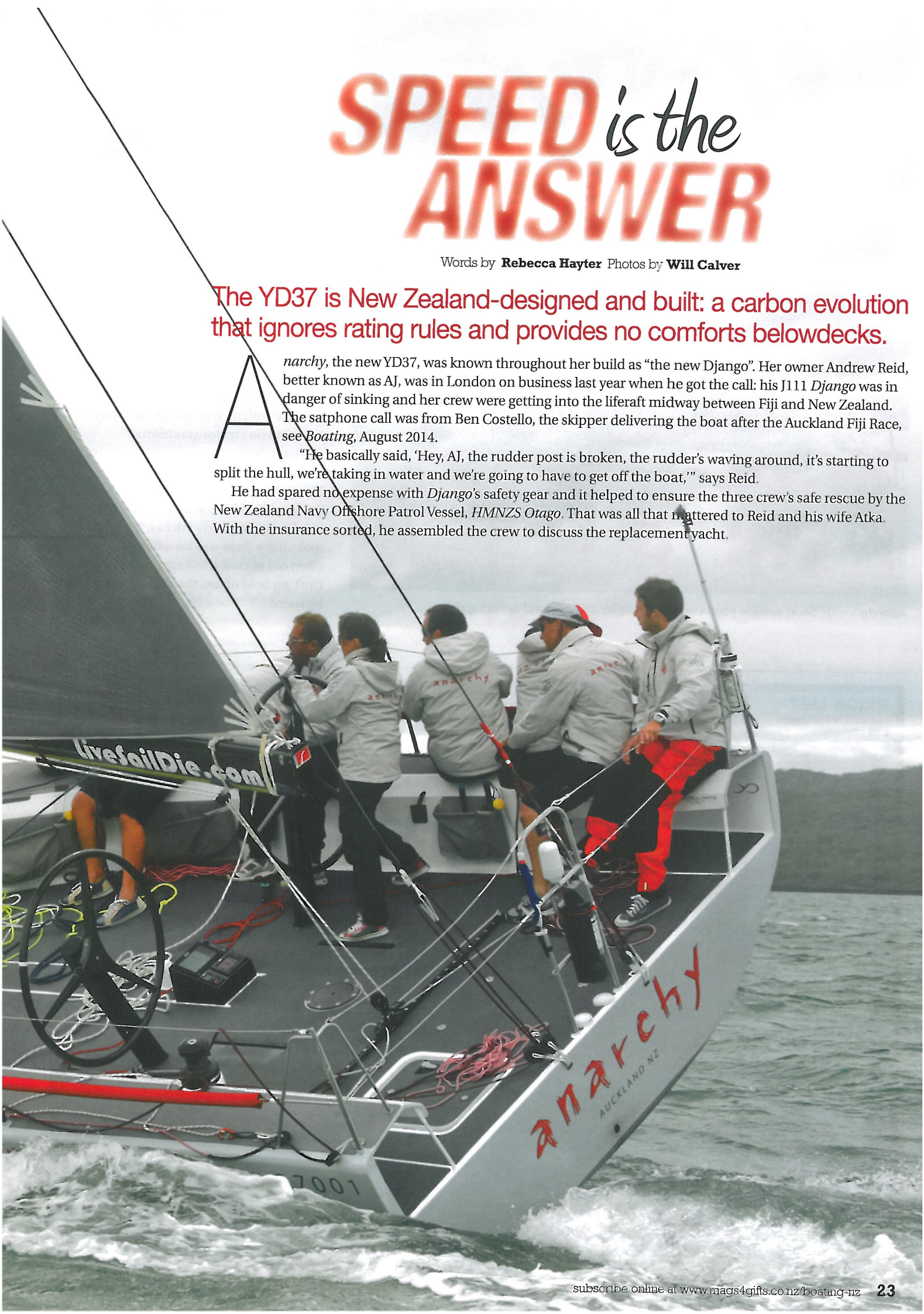
Words by **Rebecca Hayter** Photos by **Will Calver**

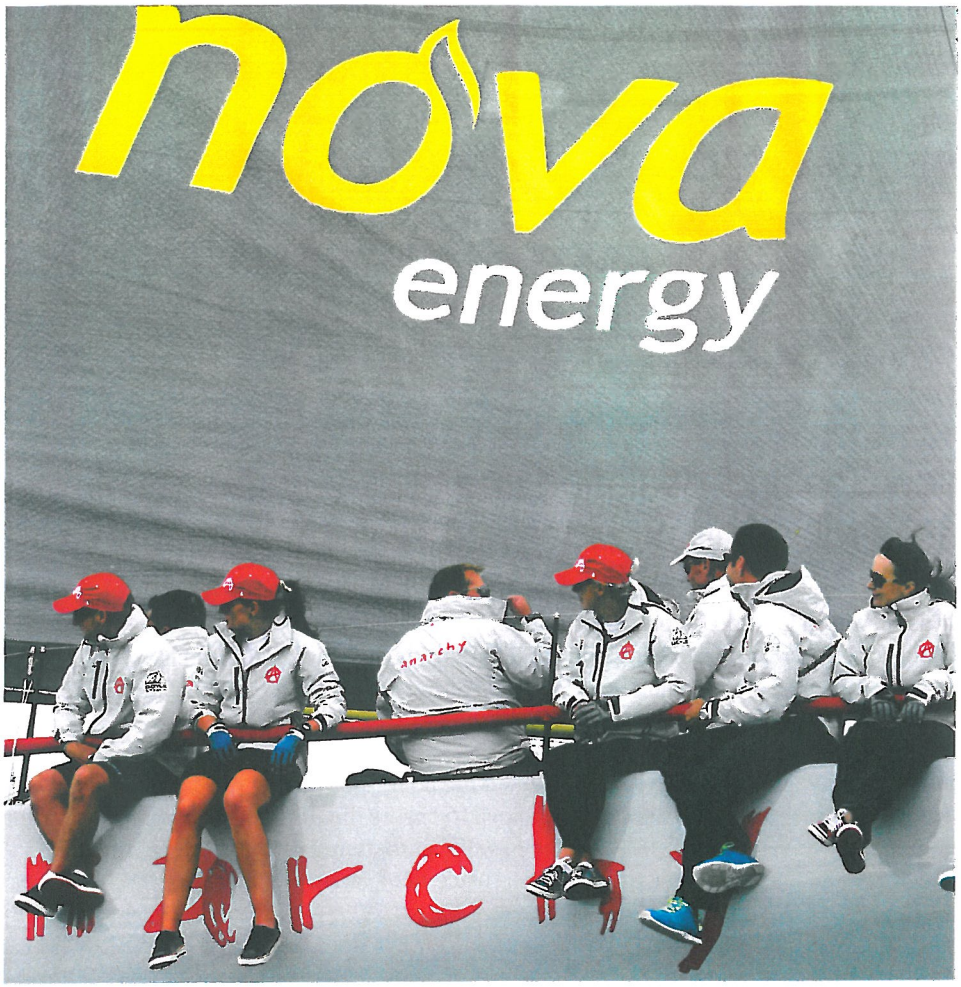
The YD37 is New Zealand-designed and built: a carbon evolution that ignores rating rules and provides no comforts belowdecks.

Anarchy, the new YD37, was known throughout her build as "the new Django". Her owner Andrew Reid, better known as AJ, was in London on business last year when he got the call: his J111 *Django* was in danger of sinking and her crew were getting into the liferaft midway between Fiji and New Zealand. The satphone call was from Ben Costello, the skipper delivering the boat after the Auckland Fiji Race, see *Boating*, August 2014.

"He basically said, 'Hey, AJ, the rudder post is broken, the rudder's waving around, it's starting to split the hull, we're taking in water and we're going to have to get off the boat,'" says Reid.

He had spared no expense with *Django*'s safety gear and it helped to ensure the three crew's safe rescue by the New Zealand Navy Offshore Patrol Vessel, *HMNZS Otago*. That was all that mattered to Reid and his wife Atka. With the insurance sorted, he assembled the crew to discuss the replacement yacht.





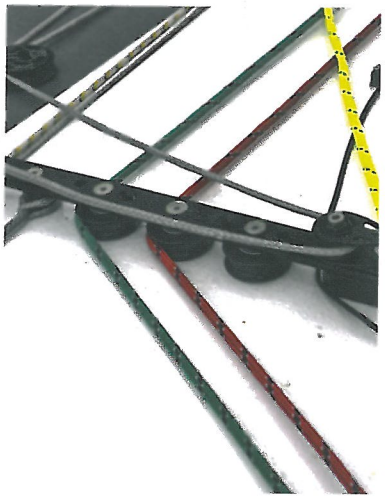
Anarchy's wide decks provide good stacking power for the crew and deflect spray.

It would continue Reid's progression in sailing from a Beneteau First 34.7, *First by Farr* – "a cool little regatta boat"; to *Django*: "We had a huge amount of fun in that boat – in the Two-handed Round North Island Race, Fiji race and Bay of Islands Regatta – but we got heaps of seconds."

This time, Reid wanted firsts. He considered canting keelers, various designs and *General Lee*, a racer based in Perth. Shipping costs and the asking price put paid to the deal, but the process led to *General Lee*'s designer, Brett Bakewell-White of Bakewell-White Yacht Design.

"I said to Brett: 'How about evolving the General Lee, five years down the track? What would a carbon evolution of that look like with no consideration to any rules and no creature comforts?'"

That's the naval architectural equivalent of: "Go for it." Yacht designers love it. Through regular meetings of owner, designer, builder and Doyle Sails' Mike Sanderson and Andy Pilcher, the new boat took shape. Reid was travelling a lot and often out of contact. "I said to Brett, 'If you can't get hold of me, the answer will always be speed.'



ABOVE: Electronics HQ on the cockpit sole, between the twin wheels.
RIGHT: The jib trimmer has inhaulers, outhaulers and lead controls.

"I'm not dissing IRC, but IRC does favour a shorter rig, shorter prod and more weight. But we are looking for high performance and want to see speeds in the high 20s."

Then came the question of where to build. "Conventional wisdom will tell you that building a sub-forty foot carbon race boat in New Zealand is probably going to be really expensive and you should do it in China," says Reid. But news of the project had reached Ian Cook, managing director of Yachting Developments. Cook loved the project and set up on the basis that more orders would follow. A new YD37 sailaway base price is $600,000 incl gst.

Within six months, the YD37 was sailing. The Reids' sons, Will, 21, and Sam, 20, named her *Anarchy*: absence of authority.

I joined *Anarchy* for a sail in early May. First impression? She's a club racer's answer to grand prix.

Anarchy's wide cockpit has four winches a side – runners, mainsheet, primaries and pit. She has twin wheels and a relatively short traveller, which I liked – it's safer. A mast jack enables crew to adjust shroud tension; halyard locks on the mainsail, jib and two code sails reduce compression on the mast and save weight aloft; barberhaulers allow control of jib inhauls and outhauls, and lead-up and lead-down on jib sheets: the equivalent of car-forward and car-back but without the awkward loads. A jib cunningham makes

Grand prix sails

DOYLE SAILS LAUNCHED Stratis ICE sails in 2013. ICE is its stage name; the technical term is UHMWPE (Ultra High Molecular Weight Polyethelene) fibre.

ICE sails have high resistance to flex fatigue, retaining their initial shape and speed longer than any other sail membrane, according to Doyles. This allows the sails to be built much closer to their work load, rather than being over-engineered in anticipation of future fatigue.

Mike Sanderson, director of sales at Doyle Sails in Auckland, former Volvo Ocean Race winner, says that *Anarchy*'s wardrobe of Stratis ICE sails is grand prix standard.

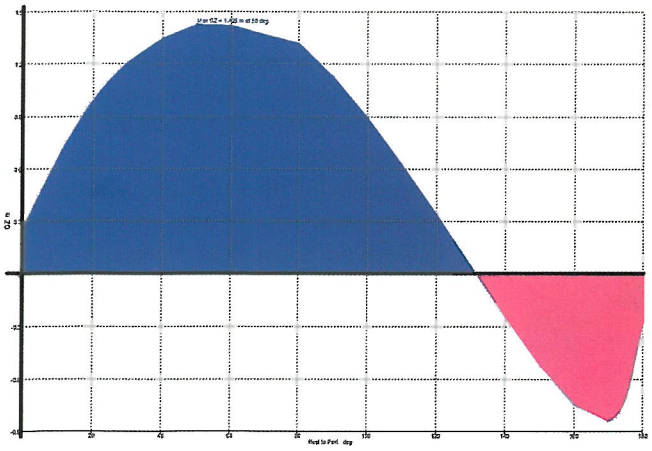
"We've got it on offshore yachts like the Volvo Ocean Race yachts and TP52s," he says.

it easy to control luff tension to trim for full height upwind or for power, without luffing the headsail. In other words, this is a yacht to be trimmed and tweaked in a continual pursuit of performance. And it's hard to miss the 2.2m prod which could do service on a 70-footer.

Reid is planning fully-crewed harbour and offshore races and extended two-handed races, including the Round North Island. The deck layout was designed with an emphasis on two-handed sailing; it's easy to depower, reef and furl sails, although even by racing yacht standards, there seem to be a million lines in the cockpit. The headsail is on soft hanks rather than foils; the logic is that when setting flying, nylon sails two-handed, the extra-busy crew can simply smoke the headsail halyard and know the sail will remain captive, whereas with a foil the sail can fly free over the side. It also saves weight on the foil aloft.

Electronics HQ is on a small box between the helms, presenting the B&G electronics and chartplotter – it's easily visible to the

GZ curve for YD37



Anarchy's static stability in sailing conditions; ie, with a hypothetical crew on the rail. Where blue intersects the axis to pink is the point of positive to negative stability.

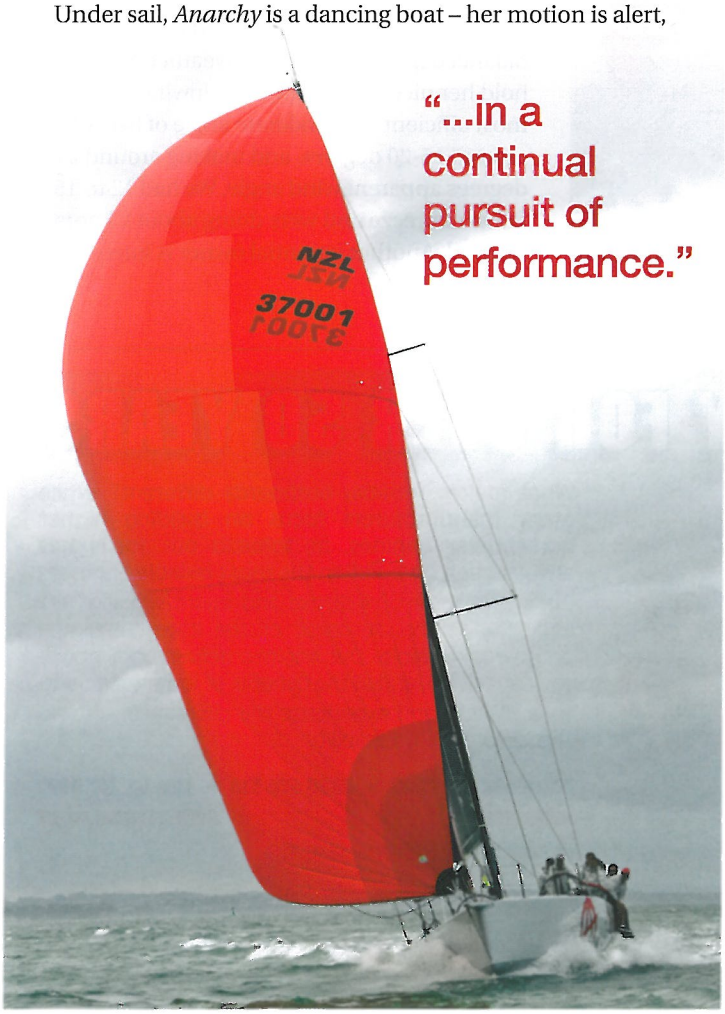
skipper, but it might be something to trip over.

We motored out of the marina under power of the Lombardini 20hp engine; these engines are light for their size range but they're noisier, especially in *Anarchy*'s carbon construction.

In open water, Reid called for the mainsail hoist; the halyard is pulled from the keel-stepped mast belowdecks to avoid bringing water into the boat.

So far, so good, but then one of the crew applied the whizzing power of a commercial-size handheld electric drill to a conventional winch fitting in the cockpit sole. Huh? The drill was turning a worm drive which in turn was raising the propeller shaft into the hull; a flange closes flush with the hull to minimise drag.

Under sail, *Anarchy* is a dancing boat – her motion is alert,



responsive with a sense of big-boat speed, thanks to her stiff, strong, carbon construction.

At the design stage, Reid told structural engineer Andy Kensington from Pure NZ: "We want to put this through absolute mega-punishment and never, ever have the feeling that we have to slow down."

Bakewell-White says that despite *Anarchy*'s carbon construction, the boat's overall weight of 3845kg is not super-light because the boat has to perform well upwind. "There is a high percentage of the boat's weight in the keel [2100kg] to generate horsepower," he says.

The transom is 3.75m wide on deck but the waterlines are relatively narrow, Bakewell-White says. "That's for reduced drag but the hull's heeled form is quite powerful so as the boat heels, it gains form stability reasonably rapidly. We made sure that as the yacht heels, it maintains its fore-and-aft trim and doesn't crank the stern up in the air and the rudder out of the water."

Bakewell-White says the rudder and keel are on the conservative side. "If we put a fully optimised CFD-derived [computer fluid dynamics] set of tiny little, low-drag foils on her, it would make it difficult to helm efficiently," he says. "The crew wouldn't get the potential out of the boat because it's just too hard to sail."

Anarchy has a generous sail area, thanks to a large square-top mainsail; the boom extends back to the runners. The combination of sail plan and foil design has resulted in a well-balanced helm, just enough weather helm to hold her nicely in the groove. Upwind, she is most efficient at a moderate angle of heel of around 15-20 degrees, and making around 21 degrees apparent wind angle. We had 12 to 15 knots of breeze and were doing about 8 knots upwind. Another potential owner is interested

Boating's Ben Gladwell goes out on a limb with the Go-Pro. Below, bowman Logan Devoy prepares for the gybe.

in a YD37 and would likely choose tiller steering.

But we were all looking forward to hoisting Rosie's Red A4, the downwind gennaker which was a gift from Reid's mother, Rosie. As we headed back down Rangitoto Channel, Rosie's Red reached for the sky and the crew congregated on the aft quarter to keep weight aft; *Anarchy* loved it. The breeze was still only around 15-17 knots but our top speed was a convincing 18 knots, and more wind would see the YD37's boat speed well into the 20s. If the crew can stack well downwind and keep the yacht at an optimum angle of heel, she can exit the gybe quickly – at up to six knots quicker than her opposition.

"With the code zero up it's going to be well heeled and going fast and the helm is absolutely neutral," Reid says, "so it's beautiful to drive and that's really important to me."

When Reid first saw Bakewell-White's plans for *Anarchy* he emailed his crew: "I will supply the snorkels."

This was acknowledging *Anarchy*'s brutally flat deck and minimal coachroof which suggested she would be a wet boat. However the narrow waterline beam and generous beam on deck deflect the water well, although Bakewell-White admits: "It might be a different story if they are doing 25 knots offshore and stick the bow in."

When Reid commissioned his YD37 from Bakewell-White, he was

committed to minimising weight and that meant absolutely no creature comforts below decks, apart from doing everything possible to keep it dry. The for'ard hatch closes pneumatically; the crew use a bicycle pump to inflate a hose around the rim to seal it, all with the aim of having a dry boat below decks.

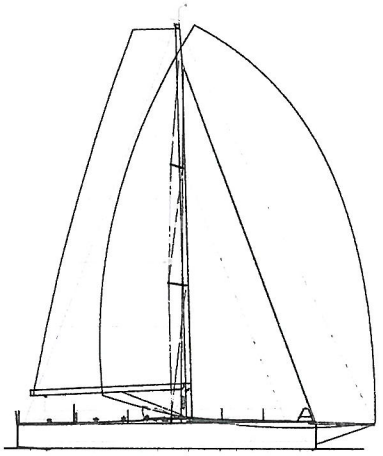
The theory will be thoroughly tested on the Auckland Fiji race in 2016, for which he is planning to take eight crew in total. "It will make for a crowded boat," he says. "The downstairs is gruesome but upstairs is a huge playground. It's a really basic Spartan, carbon hell hole but it's beautifully finished. And fast."

Another request was on behalf of the crew: a watertight bulkhead for'ard of the rudder, with an inspection hatch for the rudder in the cockpit sole. This reflects their experience with *Django*, although it's fairly standard for offshore racing yachts.

New racing yachts that are New Zealand-designed and built are a rarity these days so *Anarchy* is a welcome player on the Auckland racing scene – a great example of the high standards and massive pool of expertise available, for an affordable price. Reid and Ian Cook hope there will soon be other rebels on the harbour with which *Anarchy* can do battle.

Anarchy and her crew have plenty of potential: a fast hull, a fast sail plan and a boat that can do the business. As Reid told Bakewell-White during design: "The answer will always be speed."

Yachting Developments 37



- **Bmax** 3.75m
- **Draft** 2.65m
- **Displacement** 3845kg
- **Ballast** 2100kg
- **Sail Area Upwind** 110m²
- **Sail Area Downwind** 239m²
- **STIX Number** 45.6
- **AVS** 146.6 degrees
- **Prices from** $600,000 incl gst