

Extraordinary boats: 5.5 Metre Jean Genie

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The 5.5 Metre Jean Genie is the first ever British boat to win the prestigious Scandinavian Gold Cup, also winning this year's 5.5 Metre World Championship



Cowes-based businessman Peter Morton, widely known as Morty, is a serial winner who's enjoyed a long career on the podium at everything from the Admiral's Cup and Half Ton Cup, to the Quarter Tonners and the Fast 40 fleet. However, while much of the world was curtailed by Covid restrictions, Morton was busy establishing a complex two-boat campaign to take on another highly competitive class.

"I've always thought the 5.5s are fantastic, elegant boats," he told me, "but it was only when the Worlds came to Cowes in 2018 that I took a closer look." He liked what he saw and when a 2003 boat came on the market during the championship Morton agreed a deal to buy it.

"I thought it would be a nice little taster," he says. "We started by looking at some of the systems and figured we could improve on them. So we did some modifications over the winter, then took it to Lake Garda in spring 2019 and won the Alpen Cup, sailing with Ben Cornish and Andrew 'Dog' Palfrey."

Next was the 2019 Worlds in which they finished 5th, followed with a 4th place at the Worlds in Sydney in January 2020, but this time only three points behind the 2nd-placed boat overall. It was time to look for a new boat.

The 5.5 Metre class originated in 1949, based on the Metre Rule, and allows unrestricted development and a wide range of design interpretations, as long as each boat fits within the 5.5 Metre formula (a calculation of the boat's length, displacement and sail area). Today the class races in three divisions: Classic, Evolution and Modern, with the latter including all boats from 1994 onwards.

Since 2000 almost every new 5.5 Metre has been built by Wilke in Switzerland, to designs by Sebastian Schmidt. Morton was tempted to do the same, but considered that if a 16-year-old boat was still competitive there might be scope for more development in the class.



Elliot Hanson, Andrew Palfrey and Sam Haines sailed Jean Genie to Scandinavian Gold Cup and World Championship wins in Hankø, Norway. Photo: Robert Deaves

"So I decided to look at some alternatives," he recalls. "Back home at the start of Covid I was talking to a couple of the local yards, who were all very quiet, so I decided to build a new boat."

Designer David Hollom had already done a presentation for existing owners, with velocity prediction polars (VPPs) that looked promising. So Morton talked with Palfrey and Sydney-based naval architect Steve Quigley of One2three. Quigley designs fast ferries, including the Red Jet cross-channel ferries for Wight Shipyard, the Cowes-based company of which Morton is CEO, and is also part of the team on the famed 30m Maxi *Wild Oats*, racing on board and responsible for a lot of the optimisation. He ran CFD analysis on four different 5.5 Metre hull shapes from Hollom against scans of the lines of Morton's original boat.

Tuning partners

America's Cup legend Tom Schnackenberg, who Morton first sailed with close to 50 years ago, then ran VPPs. These showed all the Hollom shapes would be quicker than the existing boat and one of them definitely a click better than the others above eight knots of breeze.



Most 5.5s don't have a mainsheet traveller, but fitting one gave better balance control and helped the team develop more options for upwind modes. Photo: Robert Deaves



The slightly wing shape mast from Heol Composites has a long chord and is immensely stiff, so running backstays aren't needed. Photo: Robert Deaves

The *Jean Genie* is also an interesting design in other respects: the hull is longer than typical for a 5.5, but it has less sail area and is lighter. The mainsail and spinnakers are smaller than usual, but the jib, which unlike most boats in the fleet is not self-tacking, is slightly larger than the established class norm.

The build of GBR41 was finished first, so the team took it to Garda in October 2021, where, "We won pretty easily, to be honest," says Morton. "Winning that regatta also gave us the best tool we could have," adds Palfrey, "a trial horse we knew was fast."

After launching GBR42 they did a lot of two-boat tuning from Cowes, with help from a bunch of top sailors including Graham Bailey, Andy Beadsworth, Laurie Smith and Jochem Visser. "The VPPs were uncannily accurate," says Morton, "with 42 definitely having legs when there was breeze, while 41 probably had the edge when it was lighter." Morton couldn't make it to Garda for this year's Alpen Cup, so Palfrey sailed with Ruaridh Scott and Etchells sailor James Howells, where they convincingly won again.

The seeds of the two-boat programme were beginning to germinate, with Quigley also designing a 5.5 Metre. Acquisition of a 2012 boat that had never performed well provided a donor deck, keel and rudder for the Quigley boat. This was built by David Heritage in Cowes, in strip planked western red cedar to keep the cost down, and became *Girls on Film*, GBR41. Meanwhile, another Cowes yard, Gavin Tappenden's Composite Craft, got the order to build the Hollom boat, which became the *Jean Genie*, GBR42.

GBR41 is the more conventional of the two, partly due to the need to use an existing keel and rudder. But GBR42 is very different, with almost 20% more righting moment thanks to a fat keel with all the lead in the bottom. During the tuning process they also discovered it didn't need its trim tab – it could be kept locked in the centre position – which simplified the sailing and massively reduced the potential for error.



Left: GBR 42. The pre-preg deck and hull about to be joined



Right: GBR 41, the Quigley designed boat. Cedar planks laid over frames

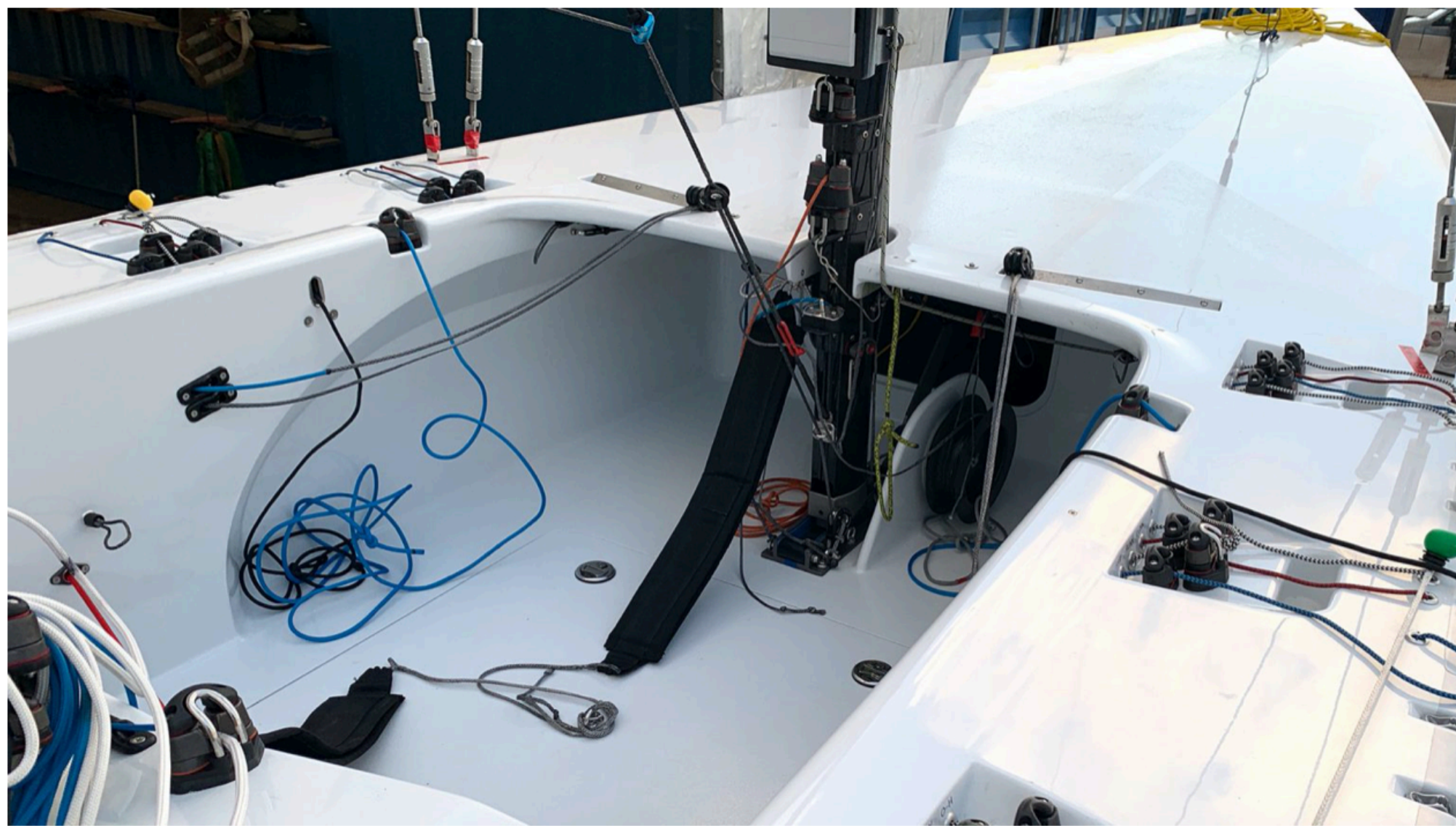


Being able to make finger-tip fine adjustments when racing in light airs is as important as control when drop hiking in a strong breeze. Photo: Robert Deaves

The two-boat tuning programme last winter was 'massively beneficial', according to Morton. This comprised several sessions, each of three or four days, just going upwind and downwind for four or five hours a day. As well as the performance data capture it also served to improve the boats' reliability. Despite this year's World Championships being a generally windy event they had no breakages. "That's absolutely a benefit of time spent on the water," says Morton.

Palfrey says the data captured during the tuning process was 'fairly simplistic' compared to an RC44 or TP52 campaign and included boat speed, rudder angle, trim tab angle and headstay load. This was analysed after each day afloat using Njord Analytics.

At this stage the team was also keen to develop the carbon rigs, which were all complex set ups with running backstays, checkstays and so on. Heol Composites in Brittany came up with two mast sections. The first was a pretty conventional section, while the other, which was ordered at a later date, has a subtle wing mast shape with a long chord.

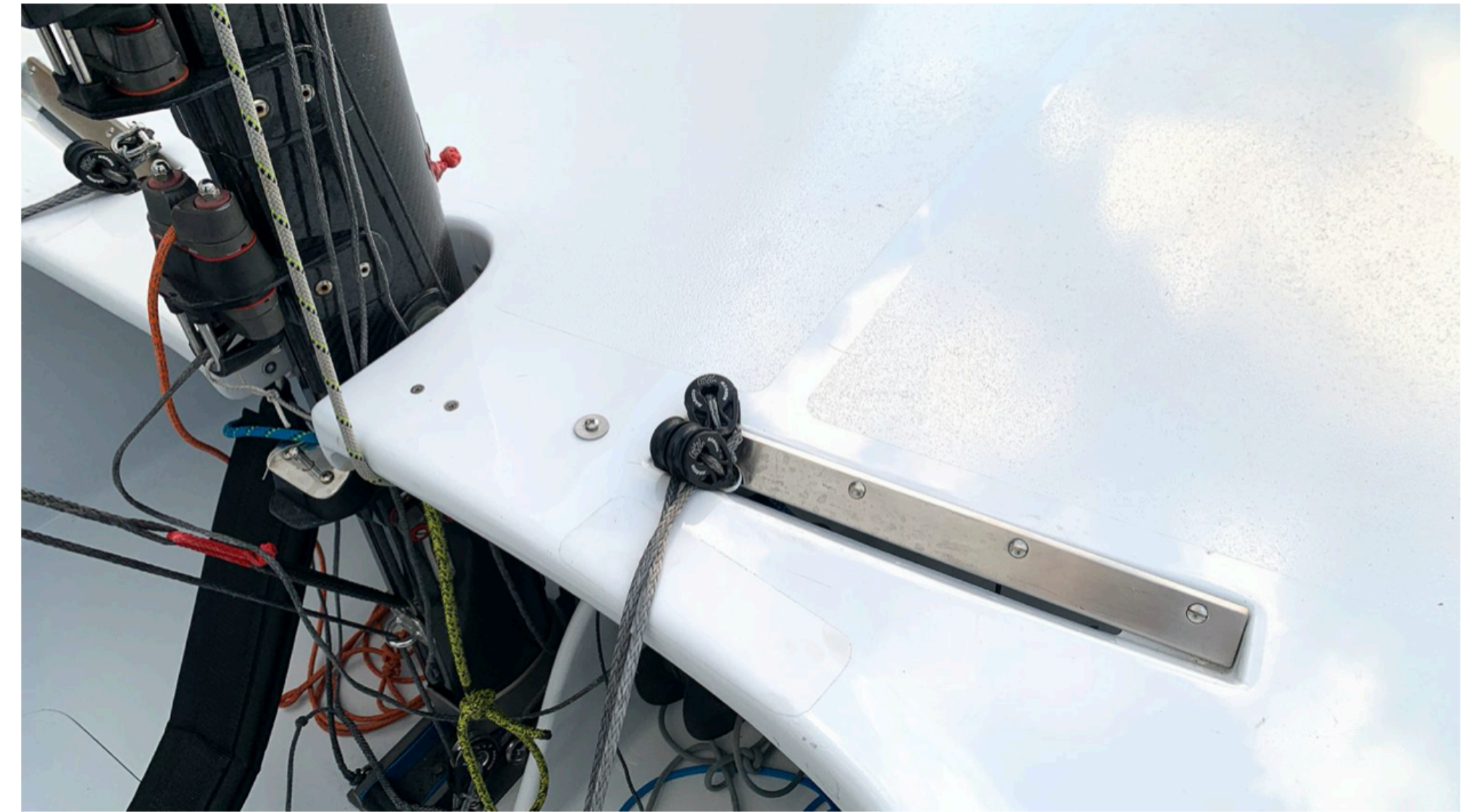


In total there are 46 control points on the boat. Cleats are placed at the perfect angle for adjusting lines while hiking hard. Photo: Robert Deaves

When the rigs arrived in Cowes the first task was to bench test them. “We were alarmed at how stiff the first one was compared to the masts we had been sailing with,” says Palfrey. This stiffness enabled the runners and checkstays to be dropped, while still achieving the same headstay loads, which massively simplified boat handling. The second rig proved to be particularly good in this respect, with additional backstay tension going straight into the forestay, instead of bending the mast. Palfrey estimates the benefit of eliminating the runners as being in the order of multiple boat lengths in each race.

Talent pool

The programme benefited from the luxury of time, thanks to many events being cancelled due to Covid, as well as an exceptional collection of talent. By the time the two crews went to the worlds – Peter’s wife Louise Morton sailed GBR41 with Annie Lush and Hannah Diamond – the technical WhatsApp group had more than 30 people, all at the top of their game.



Even the mast step can be moved fore and aft while sailing. This allows the rig to be canted right forward on downwind legs. Photo: Robert Deaves

Unfortunately Morton couldn’t go to this year’s Worlds, so he sent the boat with British Olympic Laser sailor Elliot Hanson stepping in to helm, with Palfrey and pro sailor Sam Haines crewing.

The team knew that GBR42 was fast, and were confident in its radical new rig, but the results speak for themselves. GBR42 won the Scandinavian Gold Cup, becoming the first British boat in its 103-year history to win the trophy, and then the Worlds, achieving the rare distinction of winning all three of the big class events in the same season. “They just got faster and faster,” says Morton. “In the last race they couldn’t even read the sail numbers on the boats behind – they had a huge lead.”