

For immediate release
16 November 2022

PRO-SET and WEST SYSTEM epoxy used to restore 72ft ketch: the 'life-changing' *Francis Drake*

PRO-SET® and WEST SYSTEM® epoxy are being used extensively in the restoration of ex-Ocean Youth Club sailing vessel *Francis Drake*.

This 46-year-old sailing ketch is being lovingly brought back to life by Dan Couchman who is running the build management restoration under the banner of H2Eau Projects, an arm of H2Eau Sports Ltd.

The task of renovating the 1970s structure began less than two years ago and the project is now well underway with the re-building and alteration of the hull.

"Clearly we all know that there are many difficulties attached to approaching a restoration. One of the more complicated technical difficulties regarding the composite works is how to bond new e-glass to a very old glass fibre / polyester resin structure," says Couchman. "It's fairly easy for small repairs but for larger structural areas it gets complicated."

That's why several epoxy systems were tested extensively prior to [PRO-SET](#) and [WEST SYSTEM](#) epoxy being chosen for their ease of handling, high physical cured properties and the technical assistance offered by their respective customer service teams. Both are manufactured by Wessex Resins and Adhesives (under license from Gougeon Brothers Inc).

Couchman says he chose PRO-SET epoxy for the structural hull repairs because: "It's one of the purest yet most advanced epoxy systems on the market." As the 'donor' hull was originally constructed in polyester resin, it presented a technical product challenge for ultimate structural adhesion. "*Francis Drake* was originally built to MCA code category 0, a go anywhere yacht, and we are rebuilding her back to code under survey, so we had to get the epoxy selection absolutely spot on to deliver this."

The goal for the build is to maintain the classic hull shape but to re-purpose the vessel into a modern, high-end, yacht charter (with a totally new interior - featuring a master cabin, twin aft guest cabins and a two-berth crew cabin).

The work involves a major amount of secondary bonding to the existing hull. To gain interior volume and standing height, the topsides are being raised by around ½ metre along with a brand-new deck. This not only provides a completely transformed interior arrangement but saves the extensive time involved in repairing the old deck which, after years of water ingress, was well beyond repair.

Couchman says the five-person team in Plymouth has been restoring *Francis Drake's* hull using PRO-SET epoxy products.

continues . . .

"We've upgraded some of the normal practices for GRP repair and created a semi-production repair template kit. Using this we are not only able to speed up the preparation process for bevelling the repair areas on the hull and for bulk cutting the glass fabric repair kits, but we can deliver high finish and precision composite repairs, normally only seen in the aerospace sector." Couchman says the quality of the repairs laminated in place with PRO-SET LAM-135 Resin/LAM-226 Hardener are exquisite. "We have taken time to quality check these with destructive testing, the results are completely astounding us," he says.

The lamination of a new shear-tie against the existing outer hull skin will be the next stage. The entire outer hull will then be sheathed in glass and epoxy. This will effectively mummify the old hull for a great many years to come. The adoption and application of highly advanced technical glass fabrics and PRO-SET epoxies all make this challenge possible.

Project completion is estimated to be mid-2024, when *Francis Drake* will enjoy sea trials prior to heading to the Mediterranean as a commercial charter vessel.

"*Francis Drake* is a sustainability template," says Ian Oliver, MD Wessex Resins and Adhesives. "We're delighted that the epoxy systems we manufacture are being used in this way, helping a vessel which would otherwise have ended up in landfill, see at least another fifty years or so of service."

Full build details will be released in [epoxycraft](#) during November 2022.

Memories of *Francis Drake*

Francis Drake was originally commissioned for the Ocean Youth Club and took over 15,000 students to sea between 1976-97. The restoration is filling the sailing community - who learnt to sail on her - with joy.

Andy Reed, who enjoyed his first trip onboard in 1978 as a 17-year-old, says that *Francis Drake* being restored is incredible. "GRP is a massive issue, everyone accepts that in the industry," he says. "Anything that helps towards dealing with that is a major step forward."

Richard Brocklesby, RYA yachtmaster, enjoyed three long journeys on *Francis Drake* as a teenager. He says he's really delighted that the boat's being restored.

"I saw her in the boatyard at Plymouth," he says. "She's recognisable as she's a big old boat. She was really stripped down and had no beauty about her. No blue paint, no masts, holes in the side. She laid there for a couple of years.

"I am really pleased that she's being restored now. I'm a bit of an environmentalist and I'm excited to see the sustainable development of what otherwise would be a landfill disaster. Rebuilding the boat using the shell is a great idea."

Brocklesby blames sailing on *Francis Drake* for the fact he ended up buying his own boats. He says it was definitely life changing.

continues . . .

“Sailing on *Francis Drake* inspired me,” agrees Reed who is now a yacht skipper and RYA examiner, working across the UK.

“I loved the environment and the camaraderie on the boat. I didn’t realise until that trip what was possible. It got into my blood and never left.”

ends

Notes to Editors:

A selection of images is available online at <https://maa.agency/media-centre/>

- Wessex Resins and Adhesives manufactures WEST SYSTEM (<https://wessexresins.co.uk/west-system/>), PRO-SET (<https://wessexresins.co.uk/pro-set/>) and Entropy Resins epoxy products in the UK under license from Gougeon Brothers Inc., and distributes these leading brands across the whole of Europe, Africa and the Middle East via a well- respected distribution network. It also provides international support for the epoxy brands.
- Wessex Resins has been working in partnership with Gougeon Brothers, Inc. for more than 36 years, manufacturing WEST SYSTEM, PRO-SET and Entropy Resins epoxies here in the UK.
- Whether an epoxy is needed for laminating, bonding, coating, tooling or infusion, the combined breadth of WEST SYSTEM, PRO-SET and Entropy Resins products will provide the solution. WEST SYSTEM and PRO-SET have passed extensive quality testing. They are certified by Lloyd’s Register and DNV.
- **Dan Couchman** is looking at creating a template for up-cycling existing GRP hulls for modern use, with a sustainable focus. With this in mind, he is supporting the use of eco-friendly and hybrid technologies as much as possible with the objective of 'silent running'. H2Eau Sports Ltd provides B2B sales, marketing and distribution support for leading UK manufacturing brands of boating and water sports equipment for France and the Mediterranean markets. Find out more via LinkedIn or Facebook: H2Eau Projects.
- **Francis Drake's** original design was by Robert Clark. His famous designs include *British Steel* for Sir Chay Blyth and *Gypsy Moth III* for Sir Francis Chichester. Francis Drake was the longest GRP composite semi-production ocean going yacht design built of its time (early 1970s). Unfortunately the passage of many sea miles and time has revealed the consequences in boat building mixing angle iron and GRP and the redesign of Francis Drake now involves a fully composite design.
- Eight 72ft Ocean Youth Club vessels were built between 1970-76.

Media enquiries:

MAA – Zella Compton, zella@maa.agency 02392 534853

Wessex Resins and Adhesives – Sam Oliver, sam.oliver@wessex-resins.com 01794 521 111