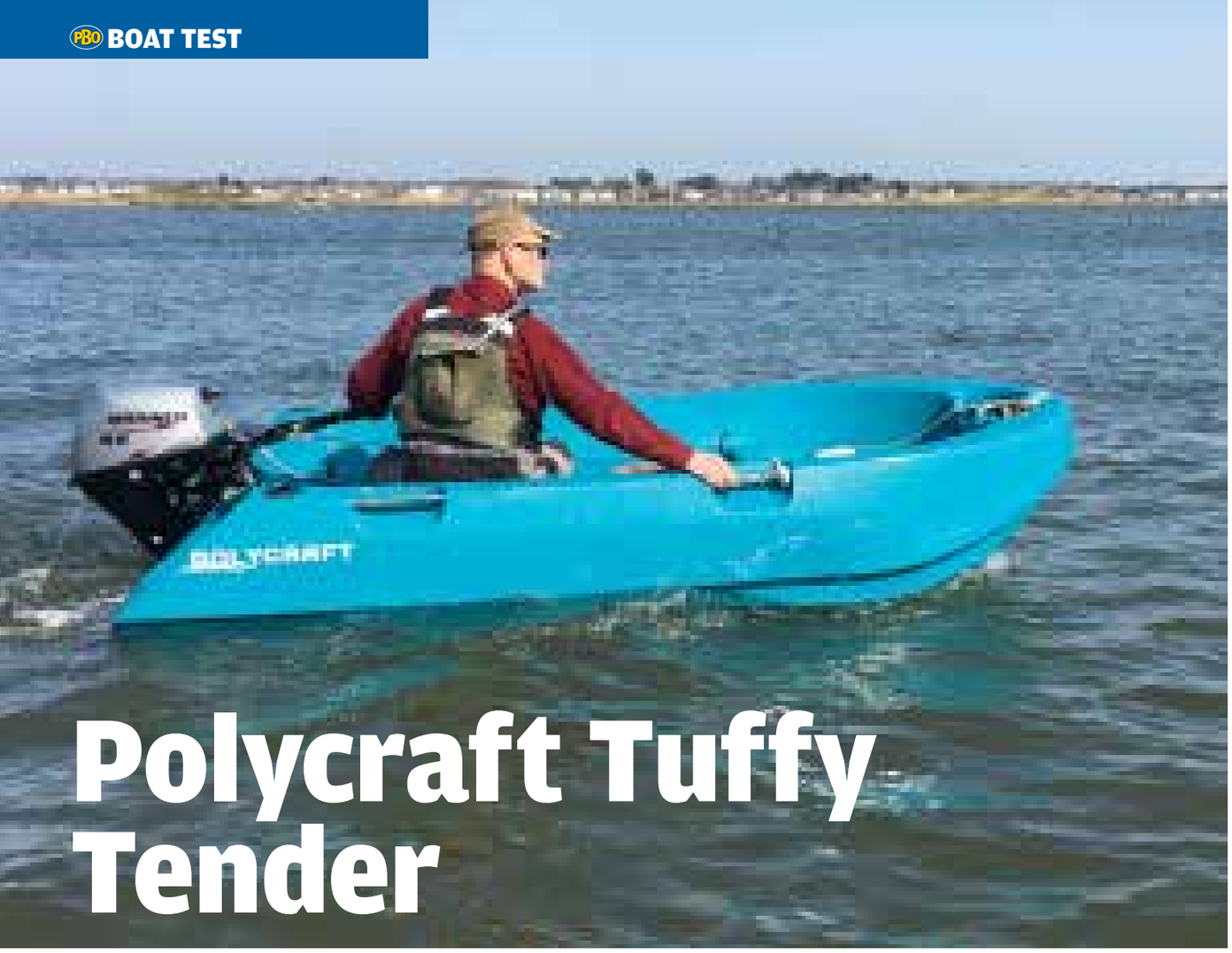


Polycraft Tuffy Tender

With the help of her local sailing clubs, Ali Wood tests this lightweight day boat with both electric and petrol outboard motor power

This tough little boat from Down Under started life as a yacht tender, but evolved into a popular choice for day-hire, fishing and exploring sheltered waters. It found its way to the UK earlier this year via distributor Mareta, who shared it with the public at BoatLife. We thought we'd put it to the test, so I asked my local sailing clubs to give it a (slow) blast in Christchurch harbour.

What better way to test its credentials than dragging it up and down slipways, running it into sandbanks and reed-beds, and using it to tow little Optimist sailors – though not a dragonboat, it transpired...

The tri-hull boat is made of 100% recyclable polyethylene, weighs 108kg, and isn't abrasive against a yacht hull's gelcoat. Though the Tuffy Tender 3.0 can accept up to a 15hp outboard, we were given a Mariner 9.9hp outboard for test purposes, and also tried it with an 1,000W ePropulsion Spirit 1.0 electric outboard.

First up, I met Steve Chapman, chairman of my local club, Hengistbury Head Adult Sailors (HHASC), where we sail a range of dinghies, including Laser Picos, Hartleys and Wayfarers. Steve is a dinghy and powerboat instructor and often drives the club safety boat. I was keen to know how the Tuffy Tender compared to the 4m Jeanneau Rigiflex ('Jaffa') club boat he usually drives.

Tuffy Tender powered with a 1kW electric motor

To experience the boat as we might a tender or a little dayboat, Steve brought his Spirit 1.0 Plus ePropulsion electric outboard. A keen caravanner, Steve takes the Spirit on holiday with his inflatable boat for exploring rivers and waterways.

"With electric outboards you have to be patient," he warned. "They don't have the power of 4-strokes, and with a maximum speed of 6 knots, are no good for safety boat duty, where you need to quickly go to a sailor's aid. Of course, the pay-off is you don't have to buy petrol and lug that around, the battery and engine are much lighter and smaller, and the silence – as they say – is golden."

Another feature I wasn't aware of is that the battery actually floats. Steve told me about someone who'd recently been reunited with his dropped battery, after it washed ashore in Christchurch and was traced back to him, saving a £1,000+ replacement.

Preparations

Steve easily lifted the 10.2kg engine from the car boot and screwed it to the aluminium transom plate on the Tuffy Tender. He then attached the fully charged lithium battery and power lead – all very lightweight and easy to handle. Next came the magnetic kill cord, and the engine powered on, displaying 1,000W and 9:59 hours. It was fully charged and time to go.

It was a calm, sunny day in Christchurch; perfect conditions for exploring the shallow harbour and, with the electric outboard, little likelihood of disturbing the nesting swans, egrets and wild ponies of Stanpit Marsh.

We equipped the boat with an anchor, VHF and fire-extinguisher, and Steve launched it single-handed from the trailer on the slipway.

Off we went for a quiet potter around the harbour in the lee of Hengistbury Head – once Britain's largest Iron Age trading port, and now a nature reserve. Had we had fishing rods with us there were two holes at the stern for mounting these. Next time maybe...

Electric outboard operation

Having always operated petrol outboards, I was struck by how utterly simple it was to use an electric one. No priming, no fiddling with the choke, or yanking the pull-cord hoping it would start on the third pull. A child could easily operate this (and in fact, I've since ordered my own ePropulsion electric outboard for testing in the harbour with the kids).

Steve advised me to sit on the opposite side to the arm so I had more leverage, and from this position it was a simple matter of twisting the throttle away from me to increase speed, and towards me to decrease speed, until it reached neutral, or zero (indicated by a soft click).

At this point, if I pulled it further towards me it took us quietly into reverse. No ear-grating gear changes. It felt very intuitive, and the boat handled easily between forwards and reverse, speeding up and slowing down.

Most of us Christchurch dinghy sailors become acquainted with the reeds at some point. In fact, being towed out from the reeds is a rite of passage, so it was nice to get close up, enjoy the birdlife, but know we had the manoeuvrability to ease away, and the tranquillity to hold a conversation.

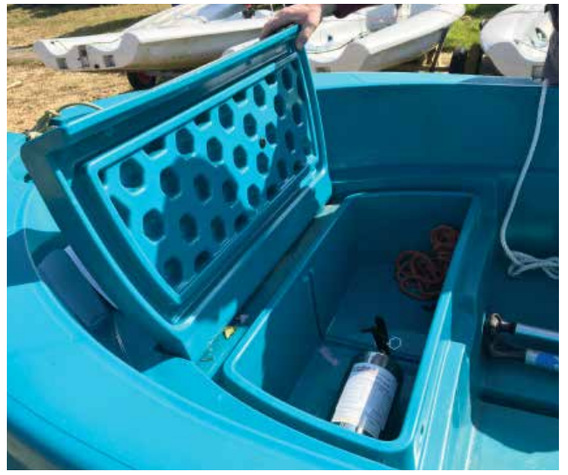
Boat speed

Steve used an app on his phone to measure our top speed via GPS, and though it felt like we were going faster, we reached a top speed, against 2 knots of tide, of 4 knots. That was with the engine on full power, ie using all of its 1,000W capacity. At this rate, we only had 1.5 hour's battery life left!

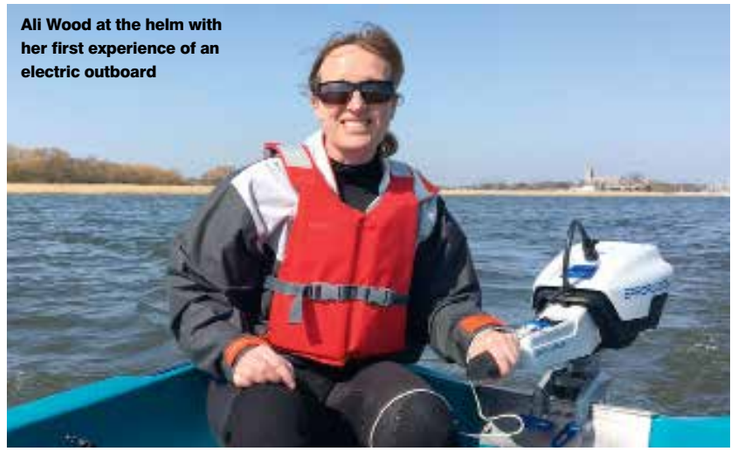
Interestingly, when we decreased the throttle to less than 20% (185W to be precise) we still made 1.4 knots, but now had 7 hours of battery life left. Electric engines are popular with fishermen because they don't spook the fish, and are designed to be most efficient at 'trolling speed', that is, the ideal speed for trailing a hooked lure through the water.

Tri-hull configuration

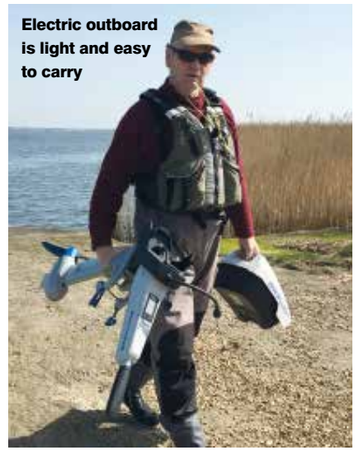
Though the electric engine lacked the power of a petrol engine, it wasn't this alone that topped our speed at 4 knots. The Tuffy Tender has three hulls, rather than a V-hull. Good for stability, but less so for efficient motoring with low power, noted Steve, as at displacement speeds the boat created three sets of bow



LEFT Front locker can be compartmentalised into two halves
BELOW LEFT Sturdy side grab bars (two on each side) and holes for fishing rods at the stern
BELOW RIGHT Hull bung – we suspected a leaky seal on ours



Ali Wood at the helm with her first experience of an electric outboard



Electric outboard is light and easy to carry

waves, interfering with one another and churning about inefficiently in the hull concaves.

We achieved a much higher speed with the 9.9hp Mariner 4-stroke as the cathedral nature of the hull allowed efficient planing performance combined with a soft ride and sharp, predictable handling.

The boat's outboard sponsons are carried aft of the transom providing ample additional buoyancy exactly where it is required to support today's heavy 4-stroke outboard engines allowing the boat to trim very level at slow speeds. The sponsons' sterns also have a handy moulded step for getting swimmers out of the water.

Tuffy Tender powered with 9.9hp Mariner 4-stroke

The feel of a 4-stroke engine was markedly heavier after using an electric outboard and the noise much more intrusive, of course, though I soon got used to it.

As with the ePropulsion Spirit, the gear change was operated by twisting the throttle itself, but with a much clearer feel and sound when the engine changed gears. I was more comfortable with this; knowing you're in neutral is an obvious safety feature and useful for tight manoeuvres, not to mention when you're around swimmers or objects that might foul the prop. With the electric engine, the whole feel of gear changes was much more subtle.

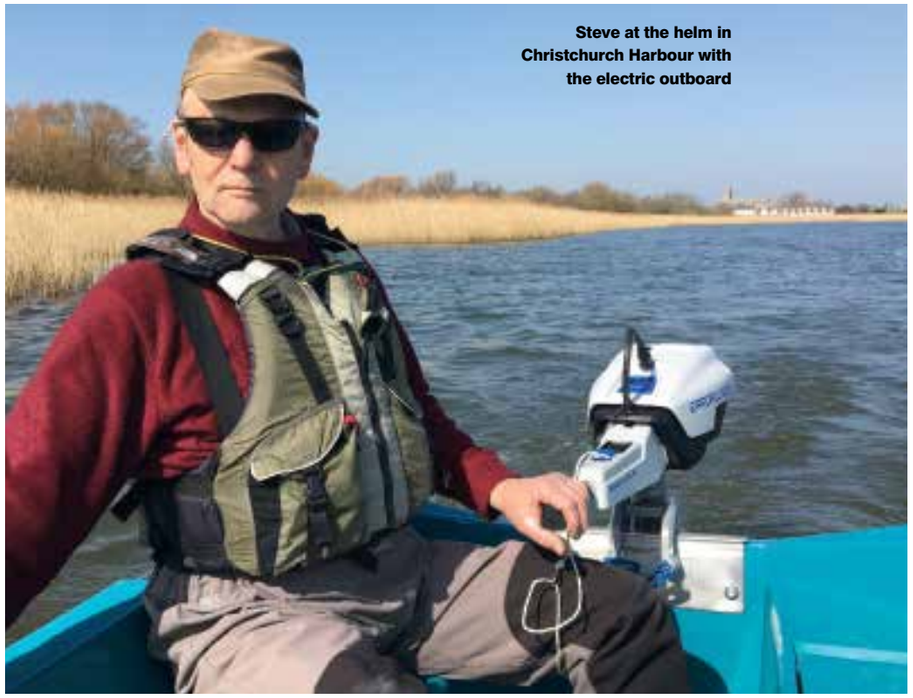
The unique feature of this engine is that it tilts on a ratchet – good for quickly lifting and securing a prop in shallow water – but in order to get it back down you first have to lean right down on the tiller (tip the engine all the way forwards) to release it, therefore taking your eyes off the water. Steve wasn't keen on this feature.

"With a club boat, you have different drivers from one week to the next, with varying powerboat experience," he said. "An unusual feature like this could be tricky to get the hang of. Most people will be more familiar with simply lifting the engine and securing it at the new height with a lever."

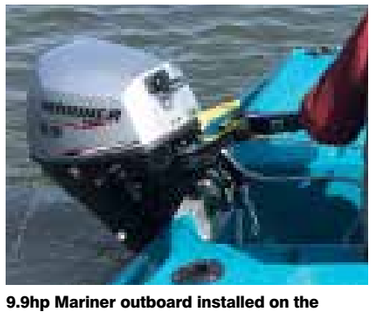
I quite liked it, because I could quickly lift the prop without fiddling or having to lean outside the boat to find the lever.

A feature Steve and I both agreed was a bad idea on the Mariner 9.9 was that it could operate without the eye-drop style killcord. Granted, if the helm falls overboard the crew needs to start the engine to rescue him or her, but this is why we carry a second kill cord. There have been too many well publicised cases of powerboat crew falling overboard, and the boat driving in ever-decreasing circles around them until they are hit by the propeller with devastating consequences.

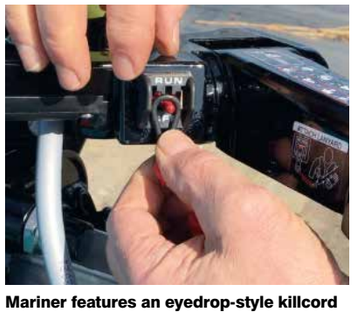
When driving a safety boat, I like to know that I (or anyone else) can stop the engine in an emergency by pulling out the killcord – especially with kids in the water.



Steve at the helm in Christchurch Harbour with the electric outboard



9.9hp Mariner outboard installed on the Tuffy Tender 3.0



Mariner features an eyedrop-style killcord switch

Boat size

With a 1.4m beam and 3m length, the Tuffy Tender isn't the most compact boat, so you'd need to ensure you've enough space to keep it as a tender (for something more portable, see PBO's compact inflatable tender test at **pbo.co.uk**). However, it is light enough to be handled by just two people, using the recessed stainless steel handles.

The capacity states three people but gives a maximum weight of 217kg, which I would say is on the low side for three average men. Two adults and a child might be more realistic.

Dragon boat racing

We passed the Tuffy Tender onto fellow club member David Brookes, who drives the safety boat for *Pink Champagne*, a dragon boat crewed by breast cancer survivors. David used the Tuffy Tender for a three-hour session and found it to be comfy and stable. When single-handed it was great, though he did add that having the fuel tank stowage at the back isn't as useful as at the front, where it can counter-balance the weight of the helm. With a longer fuel line, the tank could be stored in the bow locker.

Perhaps because of this imbalance when David shared the boat with another 'largish' man, he found the 9.9hp engine wasn't quite powerful enough and towing a dragon boat was out of the question (Mareta say the Tuffy Tender wouod normally easily place with a 9.9hp engine). A 15hp motor might have been better on the day.

Another important feature of a safety boat is having space for a casualty.

"If we're rescuing someone, we need the space to sort them out, warm them up; put a tinfoil blanket on them, for example," said David. "It's a great layout, but needs to be bigger to help out in that respect, so I'd be interested to try the next size up."

Water in the test boat

Though impressed with the boat in general, David pointed out a few issues with the Tuffy Tender.

The lockers had no self-drainage so were 3in deep in water by the time they finished the session – simply from the wash of other boats in a harbour, not any kind of sea. The anchor locker (which did drain) is on the small side – not big enough for marker buoys, for example. Also, when they lifted the boat out they found water between the two skins.

"You could hear it sloshing around", he said. "We took out about a gallon of water when we undid the bungs."

Steve and I also had that issue after our two-hour session on a very calm sea. We probably emptied half a litre when we tipped the boat on its stern.

There's no reason for water to be trapped there: the bungs are provided only to release trapped water if the boat sustains damage and gets a minor hole. However, there was no evidence of impact damage.

After contacting Mareta we concluded that the rubber seals on the bungs were probably not sealing correctly – an annoying but easily rectifiable problem. Unfortunately we weren't able to get spares in time to solve this during our test.

Second opinion

Given high winds, and a shortage of volunteers at the next HHASC session, it wasn't practical to use the Tuffy Tender for safety boat duty with the adult sailors. However, we lent it to Ricky Lee-Harris, Junior Captain at Christchurch Sailing Club, where it could be used to tow young sailors on Optimists.

Ricky was impressed with the Tuffy Tender's lightness and easy handling onshore. It could be lifted on and off a trailer with just two people, or dragged ashore and launched single-handed.

On the water, he commented: "It planes quickly and turns on a sixpence. However, it's quite 'floaty', and drifts quite a lot, which can make it tricky to judge manoeuvres."

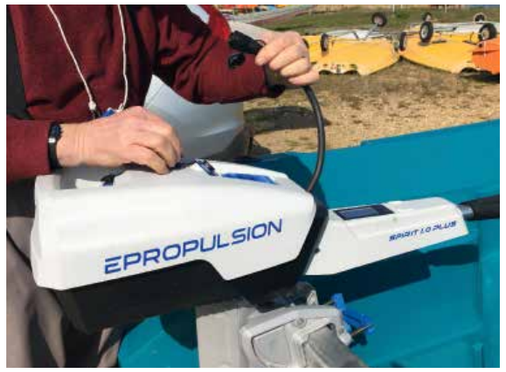
Conclusions

We found the 3m Tuffy Tender to be nippy, easy to drive and responsive. However, its lower payload capability makes it impractical for a three-man club boat (two crew and one casualty). As an easy-to-lauch coaching or committee boat, however, it could be ideal.

While a nice feature is the steps in the sterns, they're too near the propeller for this to be safe in a rescue situation – though the engine would, of course, need to be fully off to recover a casualty.

What the club Jaffas have, which this boat lacks, is a smoother, more domed bow that does not have a great deal of volume or freeboard. It means that if the worst happens, and you have to rescue an immobile casualty, you can drag/slither them out over the bow, which sinks a fair bit, and can be kept low to the water by the weight of the crew.

So, while not comparable to the larger Jaffa safety boats used by Christchurch and Hengistbury Head Sailing clubs, the Tuffy Tender is a tough, rigid alternative to an inflatable tender. It's also suitable for day trips and is surprisingly light and manoeuvrable, with plenty of space for a coolbox, fishing gear and for two people to go pottering and exploring. PBO



TOP LEFT Magnetic killcord on the electric outboard
TOP RIGHT ePropulsion battery is light enough to be easily portable
BELOW LEFT Steve attaches the battery to the drive and control unit
BELOW RIGHT Reduce power and speed and remaining battery run time increases significantly

TUFFY TENDER SPECIFICATION

Length	3.00m	9ft 10in
Length with trailer	4.30m	14ft 2in
Height on trailer	1.05m	1ft 5in
Beam	1.40m	4ft 7in
Draught	0.54m	1ft 10in
Weight	87kg	192lb
Motor shaft length	38cm	15in
Max power	15hp	
Weight capacity	180kg	397lb
Price	£2,800	
Contact	mareta.com	

FEATURES

2 x hand rails (port/starboard)
2 x fishing rod holders & caps
2 x rowlocks
1 x transom plate for outboard
1 x anchor well
1 x bow shackle & bow cleat
2 x rear seat storage units (in-built, port/starboard)

SPIRIT 1.0 PLUS ELECTRIC OUTBOARD

Power	1kW (3hp equivalent)	
Input voltage	39V-60V	
Standard battery	Spirit Battery Plus, 1276Wh li-ion polymer	
Motor Weight*	10.6kg	23.4lb
Battery Weight	8.7kg	19.2lb
Charging Time	Standard charger: 8.5hr Fast charger: 3.5hr	
External Battery	Yes, and e-Series battery recommended	
Propeller	11 x 5.8 two-blade composite propeller	
Trim/tilt Angle	0°, 7°, 14°, 21° / 70°	
Shaft Length	Extra short, short, long	
Motor	Brushless DC motor	
Travel	Forward/stop/reverse	
Direct Drive	Yes	
Maintenance-Free	Yes	

MARINER 9.9 PETROL OUTBOARD

Engine type	4-Stroke	
Displacement	208cm³	
No. of cylinders/ configuration	2 (in-line)	
Full throttle operating range	5,000rpm-6,000rpm	
Fuel system	Carburettor	
Starter system	Manual or electric	
Gear ratio	2.08:1	
Weight with propeller	38kg	84lb
Fuel tank (external)	12lt	2.6gal
Control	Tiller or remote control	
Trim & tilt method	Manual tilt	
Lighting coil/alternator	6A	
Propeller	Aluminium	
Gears	Forward/neutral/reverse	