#### Feature Floating trailer



ill Winmill and Nathan Hill admit floating trailers are not an original idea – Nathan saw similar systems in Hawke's Bay – but the custom Revo trailers they've built for their Jim Pauling-designed Revo 6.1-metre aluminium boats are altogether more sophisticated than their North Island progenitors.

The men launch their boats from Waikouiti, a modestsized coastal settlement with a population of around 1100, around 40 minutes' drive north of Dunedin. At one end of

the beautiful sandy beach is Karitane Estuary, at the other end a headland that provides some protection from the open sea.

This beach was the catalyst for Bill and Nathan's Revo boat and trailer system.

Bill runs a successful forestry business and uses the engineering shop on his property to service his heavy machinery and fabricate whatever else is required. Nathan works for him as a fitter and welder so with Bill's help building two Revo Beachcraft 601 Pontoon boats from

CNC-cut panels, and the trailers to go with them, was straightforward enough. They'd already worked together on Bill's jet-powered Revo 8m model, kept at Bill's West Coast crib near Haast (see *Boating NZ*, November 2010).

Bill used to beach-launch a McLay trailer boat into the surf at Waikouiti, but launching was only possible when surf conditions were perfect, and there was always a nagging worry about getting the boat safely back on the trailer at the end of the day.

Beach launching and retrieving is never easy. Trailers

Waikouiti locals collaborate with boat designer Jim Pauling to create a novel boat and trailer beach-launching solution.

# Words and photos John Eichelsheim

and/or vehicles can become stuck, and rogue waves can fill boats with water or throw them up onto their trailers causing damage. Backing your tow vehicle into the sea will also severely shorten its life!

Bill and Nathan's solution, with help from Revo designer Jim Pauling, was to build floating trailers that remain strapped to their boats. The rig is unhitched from the vehicle, an oversize jockey wheel is fitted, and the whole thing is wheeled into the surf bow-first, leaving the 4WD tow wagon high and dry.

The boat and trailer combinations float in a metre or so of

water when the outboards can be lowered and started. The boat-pushers then clamber aboard and the whole rig can be driven out through the surf. Once clear of the surf zone, the boat and trailer combinations are anchored in deep water. The Revo boats are then unstrapped from their trailers and driven off, leaving the trailers floating at anchor, although Bill told us that on one occasion he returned to the beach only to find his trailer gone. A concerned boatie had found it floating in the bay and towed it in to shore. Bill's trailer is now painted with a notice asking fellow boaters to please leave it anchored.





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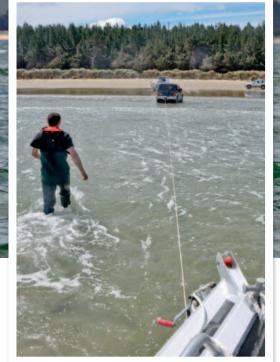
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#### OFF THE BEACH

Bill and Nathan demonstrated the beach launch and floating trailer system for us in the water off Waikouiti beach.

I started the day aboard Nathan's boat. Launching through the surf was a piece of cake, although a wetsuit or waders are a good idea if you want to stay dry while pushing the boat out.

Bill wanted his boat and trailer to float higher than Nathan's so it was even easier to launch and retrieve off the beach, which he often does by himself. Sealed aluminium chambers form 'wings' at the back of his trailer and also serve to guide the boat on and off.

In addition, Bill has fitted an inflatable bladder into the c-section aluminium trailer frame. He can increase or decrease the amount of air in the bladder, and therefore its buoyancy, using a simple valve that can be reached from inside the boat. A battery-powered pump stowed in a locker in the bows is used to inflate the bladder.

We punched through the low surf in Nathan's boat and were soon anchored in



LEFT: Launching and retrieving the boat and trailer combos off Waikouiti beach ABOVE: Bill unhitches his boat from the anchored trailer out in the bay

the bay beyond the surf line while we waited for Jim and Bill in the second boat. Pretty soon both trailers were riding at anchor and together we headed out to sea to try our luck with the Otago blue cod population.

Local knowledge ensured a good catch, and it was interesting to see so much wildlife amongst the tall kelp forests. There were seabirds of every description and pods of Hector's dolphins cavorting around the boat. Spiny dogfish were a bit of nuisance, but it didn't take us long to amass a decent feed of succulent blue cod.

#### **BACK TO SHORE**

Retrieving the boats was just as simple as launching them. The 601s were driven up onto the anchored trailers, which are equipped with PVC sliders rather than rollers, and secured with strops. The anchors were then retrieved and the rigs driven through the surf.

We had a few issues getting Bill's boat onto the trailer initially because he'd inadvertently left too much air in the bladder, but it was quickly sorted out by





Both trailers floating at anchor, Bill's with additional buoyancy provided by a bladder system he can inflate with an electric pump, plus aluminium 'wings' over the guide poles

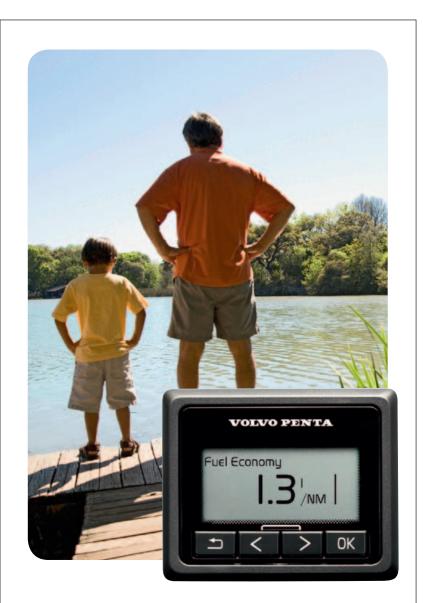
### "Normally there's a real risk of waves coming in over the transom when a boat is sitting stern-to on the sand."

deflating it. Once the boat was strapped down the bladder was pumped up again for maximum buoyancy in the surf.

I was surprised at how close to the beach we were able to come with the outboard tilted up but still providing enough thrust to roll us up the sand and into the shallows. When we finally ran out of water, Bill stepped over the bow to fetch the truck. He slipped a length of line over the tow ball to pull the boat and trailer out of the water without getting his Land Cruiser wet.

Another advantage of the system became clear as I waited for Bill to pull us out. With the boat stationary in the surf, it was at the mercy of the incoming waves. Normally, there's a real risk of waves coming in over the transom when a boat is sitting stern-to on the sand. But the trailer raises the boat high enough out of the water that the waves mostly pass underneath, and the odd one that did strike the Revo's transom only shoved the rig further up the beach. Magic, and I didn't even get my feet wet!

Bill and Nathan's unusual beachlaunching and floating trailer system works a treat, allowing them to launch their boats off Waikouiti Beach whenever conditions are suitable. It's a clever solution to a problem shared by many boaters around the New Zealand coast.



## GET THE Whole Picture

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SY BOATING

#### Revo Beachcraft 601 Pontoon

he Revo Beachcraft 601 Pontoon doesn't look much like a pontoon-style boat. In fact, many casual observers think it's a conventional hull according to its designer Jim Pauling.

Jim has managed a very slim-line pontoon design that allows the boats a generous internal beam, but still provides ample reserve buoyancy, especially in conjunction with the boats' sealed underfloor chambers. Construction comprises 4mm hull plates with 3mm decks, pontoons and superstructure. Two full-length longitudinal beams, plus frames and stringers, provide additional structure, but pontoon designs are inherently strong.

The pontoon design is a first for Jim Pauling, who produces kitsets for a number of trailer boat designs under the Revo brand. These are supplied as CNC-cut aluminium panels that can be assembled by anyone with the requisite welding skills.

While constructing pontoon boats is more complex than building conventional monohulls, Jim has designed the 601 Pontoon with minimal folds. Nathan and Bill's boats appear strongly-built and are finished to a good standard, with the welds left un-ground for strength and the unpainted alloy protected by a coat of Nyalic. Bill's engineering shop is equipped to manufacture more 601s under the Beachcraft name.

Bill's Revo Beachcraft 601 Pontoon and its trailer were first off the rank. It is a centre console with a sturdy aluminium T-top bimini, and Bill's trailer has undergone rather more development than Nathan's.

Nathan's boat is a cuddy cabin version that maximises cockpit space but offers plenty of dry gear stowage under the foredeck. His trailer is simpler than Bill's and doesn't float quite as high, but both trailers achieve the same result.

In both boats the decks drain aft into a sump or through corner duckbill scuppers, side pockets are long and deep, and there's excellent toe-room and lockers across the transom and in the cuddy or console.

Interior layouts are simple but practical, batteries are well-protected, and there's plenty of space for electronics. Bill's centre console has both Lowrance and Furuno displays.

Jim designed a relatively fine entry for the 601, with the pontoons tapering upwards towards the bow. The pontoons are also quite slim in section, which provides only a narrow spray rail forward. Consequently the hulls are somewhat wet when the wind is on the quarter, but this is more than compensated for by their excellent ride.

No strakes and narrow chine flats mean there's no jarring in a quartering sea, and the 18.5° deadrise hull (at the transom) is a soft rider that responds readily to engine trim adjustments. Stability at rest is better than most monohulls, but the boats heel slightly more than some pontoon designs I've tried.

Performance and handling are impressive. We had a reasonably choppy sea to contend with out past the headland, but the boats easily took the conditions in stride, covering the water efficiently and tracking well. There's no tendency to broach in a following sea.

An Evinrude E-Tec 130hp on Nathan's boat and a 150hp E-Tec on Bill's boat provided motivation. These are grunty engines that swing large propellers, making them ideal for this type of work. They get the power down when punching through the surf and drive the boats and trailers up the beach coming back in.

Both boats weigh around 1000kg full of fuel (100 litres), but Bill's is the quicker of the two with an extra 30hp.



The Beachcraft Revo 601 Pontoons have identical hulls but different deck configurations. Bill's, above, has the bigger engine, but both boats perform well



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