

Riverboat history brought **BACK TO LIFE**

Robert Baldwin and Joss Ebben dreamt for years of taming the rapids of the Whanganui River and reinstating the river boat service from Whanganui to Taumarunui through some of New Zealand's most scenic waterways.

Robert, affectionately called Baldy, even though he still sports a good crop of hair, had been on the Whanganui River for most of his life. He represented New Zealand in kayaking, using skills gained from his experiences on the river.

This love of the river finally made him decide to build a river boat. Baldy and his good mate and business partner Joss Ebben knew the time was ripe. "If we don't have a crack now, time will pass us by," Baldy said.

Today, travellers can relive the experience on board the steel river boat *Adventure II* on trips lasting up to four days, braving 239 rapids, recreating a voyage last completed in 1928. There are also shorter trips, including evening cruises to a local river hotel for a pub dinner.

The *Adventure II* made her first trip from Whanganui to Taumarunui in mid-June, 2010. Steady rain the previous week and at times during the trip made for good boating conditions. Speeds up-river varied between six and 10kph, increasing to about 15kph back downstream.

"Another trip four months later did not quite go all the way," said Joss. The next one is planned for winter 2011.

"We'd like to be able to make regular trips to Whakahoro, where the canoeists go. It's also the gateway to the Whanganui National Park."

The boat's basic design was taken from the *Wai-iti II*, launched in 1911 by the river's most successful ferry operator, Alexander Hatrick & Co. The last and most successful of over a dozen shallow-water river boats, she worked the extreme upper reaches on the Taumarunui to Whakahoro run. The *Adventure II*'s design conforms to Maritime New Zealand survey and safe ship management standards for passenger safety.

"Our thinking was that by the last boat he would have resolved most of the problems the river will throw at you," Baldy said.

But this was not the case. The *Wai-iti II* was built far too light at just over five tons, had only 29in of freeboard and sank three times.

The new design is modelled on the shape of the hull, but whereas the old boat had a beam of 1.85m, *Adventure II*'s beam is 2.44m, to give more buoyancy. She is not flat-bottomed – a slight 75mm curve provides an easier escape route for air bubbles from turbulence and rapids.

The *Adventure II* is very strong on the bottom and has five full bulkheads down her length for strength. Bouncing on rocks is an occupational hazard of river boating and at 19.5m long with a draft of 380mm, a boat





Winching up the rapids on the Whanganui River

of this size may still face some challenges navigating the river. Not to mention the harsh treatment she will get, especially when coming down the river with the flow and the skipper misses his line, Baldy said.

The *Adventure II* is long and skinny, with round-bilge mild steel plate construction on frames and stringers to provide give when bouncing over boulders. Every edge is rounded, as sharp or square edges can catch on anything as she scrapes along the bottom or over rocks, logs and other river objects.

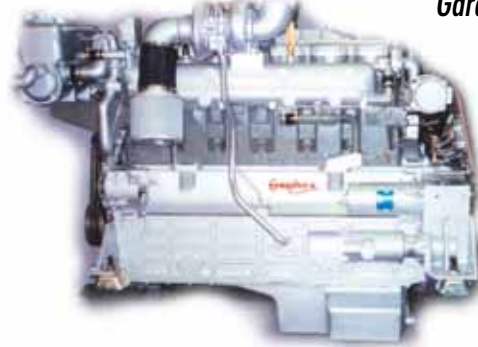
Above the deck is kept as light as possible, with aluminium bulwarks and hatch covers, 3mm angle iron framing for the deckhouse structure and cedar windows. The decks are of marine ply for strength, overlaid with kahikatea to maintain the traditional look.

Baldy and Joss did not consider jet propulsion as they present their own problems. The old boats, with their ►

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The propeller is protected by a tunnel, shown in the two images above

Steel construction

propeller in a tunnel and a winch up the front, used a proven way to navigate the river and rapids safely.

The shaft tunnel is long and deep, with extra stiffeners leading to the transom. On the stern, a pair of barn door rudders are positioned on either side of the tunnel exit, clear of any debris or boulders that might get tossed out the stern.

Her propeller is made from cast steel, as bronze is too soft, and she carries a spare. A special aluminium pattern was made so the foundry can cast spare propellers on demand.

The propeller can be changed in under an hour, without taking the boat out of the water, by removing an inspection plate at the top of the tunnel. The water level is well below this.

The crew float a piece of string through the hatch to the back of the boat, feed a rope through and tie this to the propeller. The prop nut is undone and the prop pulled to the back. The new prop is attached and fitted in reverse order.

Another underwater feature is a flap to provide a good reverse gear. This device can best be described as an

producing 127hp or, in Baldy's terms, 127 Clydesdales, and the same torque as about 350 racehorses. The engine typically turns at about 1200rpm, but can spend all day at the maximum 1500rpm if the boat has to push a lot of water.

"If it's not a Gardner it's not a real river boat engine," says Baldy. "We wanted something that would last forever and none of those electronics at all. We need simple reliability with no added bits to break down.

"If we have fuel, compression and a starter we can make it go. There are no garages up that river, we are on our own and many parts of the river are isolated with no road access," he said.

"Most importantly, when a stone jams the propeller we want it to stall. We don't want a computer deciding to pour on full power because the prop has slowed and ripping the guts out of the gearbox or shaft.

"Davy Shaw from Shaw Diesels was great and fitted a Dong-I, 1.61:1 gearbox. This gives us 12 knots at 1350rpm, with a further 150 revs up our sleeve." She is a fuel pincher, burning 10 litres an hour at service speed.

The winch can become equally as important as the prop, depending on what part of the river you are on. Hydraulically powered, with a bollard pull of three tonnes, this is a substantial winch, with an equally large warping drum capable of handling all manner of lines, even when they are joined by a quick bushman's knot.

The main purpose of the winch is to keep the bow pointing exactly where it ought to be while climbing a rapid. It is not used to physically drag the boat upriver, although it sometimes does this.

The boat can be in big trouble if she becomes beam-on in a good rapid, "trips" on a boulder and loses the bow. This prospect causes far too much paperwork, so the combination of engine power and winch gets the *Adventure II* up the rapid. The skipper drives the engine until he hears stones being picked up by the prop and thrown through the tunnel, then backs off a fraction and uses the winch.

Going down rapids is much easier, as the boat goes with the flow and power is only used to maintain steerageway. But going down a nasty rapid is a bit different.

The *Adventure II* is turned around and backed down. It sounds silly to start with but it makes sense. The maximum amount of water passes the vessel and rudders, thus there is maximum control. This is another reason why everything down the back end is built as strong as an ox, just in case the boat cops one up the bum.

The *Adventure II* is licensed to carry 49 passengers. There is plenty of outside deck space and spare poles for

There are no garages, we are on our own and many parts of the river are isolated with no road access

artificial top of the tunnel about a metre long and hinged just behind the prop. The other end automatically rises with the water flow from the prop and drops under its own weight to about 300mm under the water when the prop stops. If it were not there, the back of the tunnel would be able to draw in air.

"You select forward till you feel the tunnel fill with water – a couple of seconds – drop revs then into reverse before the water falls out of the tunnel and put on the power. If you don't go forward first, the tunnel just won't fill with water."

The flap has an extra use. It can be pinned in its down position and scour down about a metre to help keep the river channels open.

We understand this was a Hatrick invention and it is a critical component in the safety of this type of boat. Now, what were we saying about water jets? These old river boat men sure had their marbles in order.

The choice of engine was easy. It's a Gardner 6LXB



Hot work



The final stages and launching, shown in the two images above



any passenger who may want to lend a hand poling. The main saloon is fully enclosed to provide shelter from the elements.

The coach house top doubles as an observation deck, with the main conning position and engine controls for'ard, where a large traditional helm and ship's wheel is the main feature. Down aft, accessed from the aft deck, is a fully self-contained head – a loo with a view, one might say.

As noted, there is little sign of any electronics, apart from a VHF radio and a cellphone. An EPIRB is carried for emergencies. There is no plotter, radar or even a depth sounder.

It's not as though you can get lost on the river. You always know which way you're pointing. When you hit the bottom you know it's getting shallow, and radar is not a lot of use, as the *Adventure II* only operates during daylight.

Joss Ebert says patronage has been slow to take off but

is now growing, especially with all the local trips. Most passengers are local middle-aged or older folk from the Whanganui district, with a few remembering the last days of the earlier river trips. She is sure to become more popular as word gets out of this voyage into the past.

The *Adventure II* is not pretty, but all is in the eye of the beholder and she is after all a river boat, built for rugged function and adventure. ■

specs		
Type	single screw, tunnel river boat	
Length	19.5m	
Beam	2.4m	
Draft	380mm	
Weight	13.6 tonnes	
Engine	Gardner 6LXB	
Service speed	12 knots	
Passengers	49	
Build price	\$400,000 approx	



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