



Boat review **Coastguard Rescue Vessel**

# A TREASURED POSSESSION

Words by **Keith Ingram** Photos by **Nando Azevedo**

Boaties on Northland's east coast will feel safer following the recent launch of the Coastguard's new, purpose-built rescue vessel for its Whangaroa station.

“A purpose-designed rescue treasure.”





**K**ahurangi – ‘treasured possession’ – is based at the Whangaroa Harbour. Coastguard Whangaroa evolved from a local maritime radio service established in the 1960s, providing a full VHF and SSB service to both commercial and recreational users – including the off-shore cruising sailors heading into the South Pacific.

In 2009, with the assistance of Coastguard Northern Region, the ex-Tutukaka 8.5m Protector was obtained. This vessel was an ex-Team NZ support vessel from the 1990s and continued to give excellent service to Whangaroa. But she was aging and only kept operational with regular maintenance and costly upgrades to the engines and tubes. She's now been sold and retired from the Coastguard fleet.

Coastguard Whangaroa's operational area is from Matauri Bay at the south-eastern end of the Cavalli Islands, west to Berghan Point, and out to the 12-mile limit. Most of the operational area (some 374 nm<sup>2</sup>) comprises isolated, rugged coastal areas, with generally steep, inaccessible cliffs.

#### NEW BOAT

In early 2014, proposals were sought from New Zealand boat builders for a rescue vessel in the 10 to 12m range. Five proposals were received – in both alloy and GRP construction – with options of outboards, diesel engines on either jets or sterndrives.

Several criteria influenced the final decision: only diesel fuel is readily available on the harbour; the new vessel is expected to be in Whangaroa for more than 20 years as the annual operational hours are relatively small (approx. 300 hrs), so long-term maintenance costs had to be considered. A proven hull design suitable for the likely conditions outside the harbour was a must, and, of course, a competitive build price was important.

Funding was a challenge – Whangaroa's local population is less than 3,000 with a very low median income. There are no towns of any significant size in the area, nor large businesses to assist with sponsorship. So this process took a bit of time. It was only when Coastguard Northern Region and Coastguard NZ offered excellent support in obtaining a large portion of the funding, that things got going in earnest.

The team elected to go with a GRP hull from Smuggler Marine and a pair of efficient Volvo D4 diesels on the latest DPH sternlegs.

Smuggler RHIBs date back to 2005 when the company partnered with Southern Pacific, which produced the tubes on the first Strata 750 RHIB. The boats are designed by Smuggler company director and boat builder David Pringle.

We first saw the *Kahurangi* sitting on her purpose-built triple-axle trailer. At 11.2m with a beam of 3.3m, she is not your normal small rescue craft. To move her on the trailer requires a special permit for travelling on main roads. She will only do so on trips to







Opuā for major maintenance, or for an emergency reposition in the north to assist on the west coast for example.

Because of her size, it was easier to steam *Kahurangi* home and tow the trailer up north independently, avoiding the need for a special over-width permit and deflating the pontoons. With a fuel stop at Marsden Cove and a quick lunch break, the average speed on the first leg was 26 knots.

The total steam time on the delivery voyage was around six hours. Once past Cape Brett, it became quite snotty with 26 gusting 32-knot winds and 3m seas on the nose. This proved to be a good shakedown and a welcome one, as these are the conditions the vessel will be expected to operate in most of the time. Despite these conditions *Kahurangi* was able to maintain an average speed of 23 knots on the second leg.

#### LAYOUT

Stepping aboard, the vessel's GRP hull and cabin structure immediately sets her apart from her alloy counterparts. She looks classy.

The crew work area aft, or cockpit, is afforded shelter from the cabin and is low enough for the crew to reach over the side. Immediately to starboard is a small stainless steel solid davit with its own lifting warp and a winch strong enough to lift an inert body from the water.







FAR LEFT: Serious seating for serious business. BELOW: The Simrad gear helps to get the crew to stricken boats more efficiently. BOTTOM: The medical bay.



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## Hella marine

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The easily-driven hull is powered by twin 260hp Volvos with Duoprops. At cruise speed she has a range of some 350 – 380 nautical miles.



There's also a sturdy built-in swim or boarding platform across the transom, and a very solid towing post positioned amidships on top of the transom structure. Ahead of the transom is the full-width, raised engine box. Either side are twin safety grab rails to ensure the crew, when working aft, have a hand on the vessel at all times.

*Kahurangi* is powered by twin Volvo

**“Optimal cruise speed is 21 - 27 knots, consuming 1.9 - 2.1 litres per nautical mile.”**

Penta D4-260/DPH Aquamarine Duoprop – DPH Stern Drive marine diesels. Developing 260hp@3500rpm, these units offer a maximum torque of 615Nm@2500rpm. The optimal cruise speed during sea trials was 21-27 knots, consuming 1.9 to 2.1 litres per nautical mile.

At these speeds the *Kahurangi* would have a service range of 350 to 380 nautical miles with 10 percent fuel in reserve. These engines

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are remarkably quiet – with the door closed, all you hear is a murmuring hum in the bum.

Waterproof engine ventilation is through the vents across the forward part of the machinery space. There is also a small crew bench seat with stowage for tow-lines etc, underneath. There are a further two seats at the rear of the cabin, with added emergency equipment such as a petrol engine-powered fire and salvage pump.

#### **ELECTRICS**

Up-top is a large boom LED floodlight facing forward, with two smaller deck floods facing aft. There are twin remote operated searchlights, and beside the array of aerials is a siren and flashing police lights.



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A fully-enclosed cabin offers comfort and security, with seating for a crew of four. With crew safety a key feature, the shock-mitigating 'Shark' seating will absorb the worst of the conditions. The springs can absorb up to 10 gees of impact.

The dash panels – carbon fibre lookalike Formica – remove any potential glare. LED lighting incorporates both white and a red 'night' option. The wide expansive windows offer a clear all-round view for the crew.

The main conning position is to starboard, with the command station to port. Like many of her Coastguard sisters, *Kahurangi* is fitted with an extensive electronics package from Advance Trident Ltd. It comprises two Simrad EVOII 12-inch displays, one each side, for both the command and helm stations.


A Simrad 4G Radar and Structure Scan – bottom and side scan sonar – covers the above and below nav aids, with the plot being the Navionics Platinum charting system. The Simrad autopilot is fitted with virtual rudder feedback, giving positive helm control when on auto. For VHF communications, there's a Simrad RS35, and also fitted are two Simrad IS40 graphic instrument displays for monitoring the onboard systems.

As is now required on all Coastguard vessels, there is an AIS system and provision for the FLIR night vision camera. To ensure crew safety on deck there are two cameras, one covering the bow and one aft. These are wired to a 7-inch touchscreen. Finally, to assist in maintaining a stable trim at sea, the vessel is fitted with the Zipwake-Interceptor fully-automated trim tab system.

Down in the medical bay and crew rest area is a small head, refrigerated chill bin and a small sink and tea-making bench – complete with microwave and jug. A small inverter supplies 240-volt AC.

#### SEA TRIAL

*Kahurangi* feels solid in the water. Handling is positive as she responds immediately to engine and helm adjustments. Smuggler Marine has a reputation for delivering a soft, dry-riding hull, something we struggled to confirm in the calm conditions. But a passing ferry's wake did give us something of an opportunity – she hangs on in the turns.

The GRP hull softened the water noise while the built-in spray chines quickly turned any white water away from the vessel. All in all, she is a well-built ready response vessel, one that will offer the Far North the added security of a new, fit-for-purpose rescue craft designed to work for the next 20 years. 

#### Coastguard Rescue Vessel

- **loa** 11.2m
- **beam** 3.3m
- **draft at rest** 700mm
- **deadrise** 28 degrees
- **weight** 4.850kg
- **power** 2 x Volvo Penta D4-260/DPH  
Aquamatic Duoprop.
- **fuel** 800 litres diesel
- **top speed** 38 knots
- **service speed** 26 knots
- **designer** David Pringle
- **builder** Smuggler Marine

