



On-scene command and control vessel *Paorae*

The new on-scene command and control vessel is a Teknicraft foil-assisted rescue catamaran. Built by Q-West Boatbuilders in Wanganui, this 12m water-jet-propelled vessel is designed as a rapid response emergency command vessel. Paorae is able to carry emergency equipment – including foam delivery firefighting equipment – as well as acting as a forward-control operational base from which other rescue craft can operate.

The reasons given for choosing this type of craft are its proven sea-keeping abilities, rapid response speed, and stability at rest. Plus she also offers the ability to settle on the puddy when the tide runs out – leaving a stable platform from which to operate near the emergency or crash site.

The hulls and deck are constructed in 6mm marine grade 5083 alloy plate, while the cabin is in 4mm. Apart from some emergency checkered detail stick-on vinyl, the exterior of the vessel has been left to weather in its natural aluminum patina look.

Paorae is fitted with reverse sheer, forward-facing windows and a short eyebrow above – to eliminate glare and increase space at the main conning position of the deckhouse. Large SeaMac windows fitted in the deckhouse/command centre offer excellent all-round vision for the crew and skipper.

We step aboard through the rescue recovery zone, which is a large cut-out well in the deck, starboard side – with a fold-out section of the hull. This arrangement allows easy side-access for the crew to recover swimmers or floating survivors from the water. The fold-out section can also serve



Myles Fothergill during sea trials

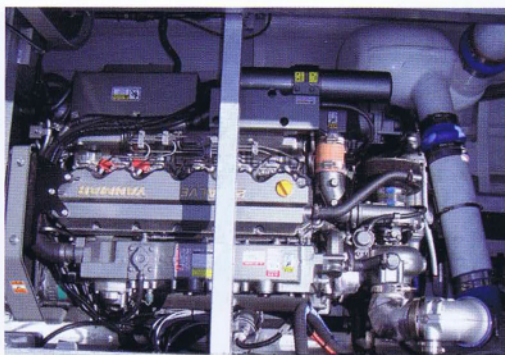
as a boarding ramp when the vessel is grounded on the mud.

Portside aft is a small head and washroom, complete with a chemical toilet. Stepping inside, there is a small tea-making facility to port with an under-bench fridge for crew refreshments while on duty. To starboard is a command chart table seating four, with a fold-out extension which doubles as the emergency medical table, capable of supporting a patient in a recovery stretcher while receiving first response medical attention.

To port is the on-scene commander position. Ahead of this is the navigator-communications person, and a conning position to starboard. The layout is clean and simple, with all the vessel's operational aids and gauges within easy reach and eye focus.



Onboard emergency generator



Twin Yanmar power below



Emergency fire pump

The electronics system, supplied by ATL, consists of two 12 inch Simrad NSE multifunction displays – chosen for their rugged hardware design and super bright displays. A Simrad 4G broadband radar offers super high target detection at closer ranges. An AIS receiver is installed for monitoring other vessels on the multifunction displays, with a transmit-and-receive AIS 'black box' manufactured by Simrad.

Also of interest is the Structure Scan Transducer which operates at extremely high frequencies and was chosen to assist in locating planes in shallow water. (Fortunately, this has not yet been used for that function.) It provides high resolution images of what is happening on the bottom of the sea floor.

As with the hovercraft, a high-resolution FLIR thermal camera is also built into the system, with the images coming up on the bright LED multifunction displays to assist when conducting searches in the dark. This display is positioned port side for ease of access for the navigator.

Simrad RS35 VHF marine radios, as well as the airport's secure radios, are fitted with hi-gain antennas for reliable communications.

For the three person operational crew the cabin is fitted with three KAB 515 SWC T1 sprung safety seats with arm and head rests. There were supplied by Tidd Ross. There's additional bench seating at the command planning table. The deckhouse is fully lined with comfortable, easy on the eye décor.

The main deckhouse is fully walk-round, with a protected cross walkway, built in front of the deckhouse, that allows the crew access to the anchor, and the large fixed firefighting rotatable nozzle mounted on the bow.

This is a Tornado fixed installation directional water spray, foam and deluge branch pipe. It can deliver 1300 litres per minute at 7 bar (or 350 gallons per minute at 100psi). *Paora* carries 60 litres of foam concentrate to combat fuel fires. Extra 20 litre containers can quickly be supplied from the airport emergency service base.

Paora is powered by twin Yanmar 6LY3-UTP 279kW marine diesels coupled to ZF 220 gearboxes powering twin Hamilton HJ-292 waterjets with blueARROW controls. This combination delivers a sprint speed of 40 knots with an economical service speed of 3.23 litres/nm at 25 knots. With fuel tankage of 1000 litres, this performance offers the vessel an operational range of 278nm – more than adequate when working the western approaches to Auckland Airport on the Manukau Harbour.

60 litres of fresh potable water are carried for crew and medical use. Aft is a large working rescue deck with two large rescue reversible 30-person life rafts mounted in quick-

release, easy to deploy cradles.

There is a Tohatsu VC52AS emergency fire pump mounted just behind the deckhouse as well as a Honda 5.5kW portable generator mounted under its own protective housing to provide emergency power for rescue tools, lighting etc.

Paora has already proven her ability to handle the Manukau's snotty chop, and while still in crew training mode, the vessel has already proved her ability to meet the expectations of crew and management.

With the exception of the two hovercrafts, which have their own ramp and base on the southern side of the airport, the remainder of Auckland Airport Emergency Services' rescue fleet (including the 'Protector' wildlife hazard vessel) are hauled on their own purpose-built trailers to and from the rescue base near the eastern approach on the tidal Pukaki Creek.

This ramp allows the crew to have all-tide water access to the harbour – an important consideration for responding in urgency to an incident on the harbour.

specs		
LOA		11.9m
Beam		4.5m
Draft		0.5m
Power	2 x Yanmar 6LY3AM-UTP marine diesels	
Gearboxes		ZF220
Propulsion		Hamilton HJ292 Waterjet
Sprint speed		40 knots
Service speed		25 knots
Fuel capacity		1000 litres
Crew		3
Builder		Q-West Boatbuilders
Design		Teknicraft