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'Lady Elizabeth IV'

**A Teknicraft-designed,
Q-West-built breakthrough
fast patrol / rescue boat**



The New Zealand Maritime Police are the owners of an extraordinarily versatile and innovative new fast patrol / rescue boat designed by Teknicraft Design, built by New Zealand's Q-West Boat Builders and featuring New Zealand's famous HamiltonJet waterjet propulsion.

'Lady Elizabeth IV' is in many ways a breakthrough design and execution, able to competently fulfil its many duties over long periods and in all weather, setting a new benchmark in clever advances for patrol boat capability.

Following a very successful year of operation around the New Zealand coastline by 'Deodar3', the Teknicraft catamaran stationed in Auckland, the Wellington branch of the New Zealand Maritime Police was convinced that a similar vessel would be perfect for their application as well.

The diverse requirements to satisfy all different operations called for a vessel of multiple capabilities which included a very high top speed, economical cruising speed, several days' endurance, a high bollard pull for towing operations and excellent seakeeping characteristics.

Following discussions between Teknicraft and the Police Maritime unit, Teknicraft only needed to do some minor alterations to the Auckland vessel for the design to meet all of Wellington's requirements. Among the modifications were increased towing capability, and increased superstructure strength to withstand possible green water from up to eight-metre breaking waves.

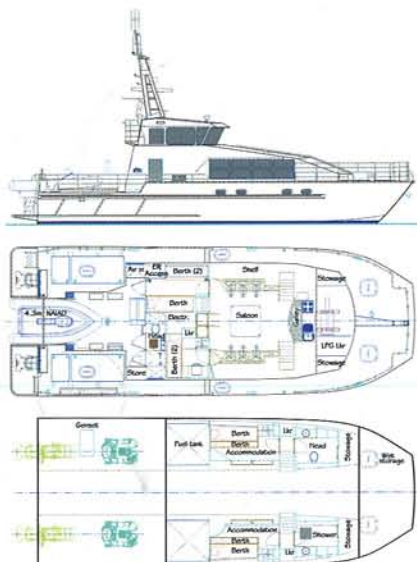
'Lady Elizabeth' is fitted with a pair of MTU 8V2000 M92 engines, each rated at 810kW. The engines are fitted with MTU's special rough weather kit, which includes modifications to the oil sump to ensure proper lubrication during operation in extreme conditions.

The propulsion is a pair of the trusted Hamilton HJ403 waterjets. Bollard pull was measured on the sistership 'Deodar3' which proved that the waterjets' efficiency at low speed (from zero to ten knots) was excellent and comparable to a good towing propeller.

The operational area of 'Lady Elizabeth IV' extends to 450 nautical miles away from Wellington, and with its 500 nautical mile cruising range, the vessel can reach the furthest points within 15 hours. Its cruising speed of 28-30 knots can be maintained at a very low fuel consumption of less than nine litres per nautical mile.

Interior finishes were accomplished with lightweight Ayres panels. The boat's interior design and colour scheme were provided by Kim Lilley (www.parkhurstdesign.co.nz), who had the daunting task of selecting fabrics and finishes which would stand up to the tough working environment of a patrol and rescue vessel.

An extraordinary feature of 'Lady Elizabeth IV' is the launch and retrieval system for the work boat. The parallelogram linkage system was designed by Nic de Waal of Teknicraft and first employed on 'Deodar3'. The method of lowering the work boat to the sea is a very simple, yet highly effective operation by which the crew can safely mount the work boat whilst still in its stowed position, which can then be lowered into the water within ten seconds; its outboard engine started, the boat can simply be driven away. Retrieval is an equally safe



and simple operation and can be done whilst travelling at speeds of ten knots and over.

To enable the vessel to be economical over a wide speed range and in varying displacements and sea conditions, 'Lady Elizabeth IV' is fitted with an adjustable hydrofoil, which not only reduces fuel consumption and increases speed, but also provides damping when rough seas are encountered.

For further information contact:
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'Lady Elizabeth IV' SPECIFICATIONS

| | |
|------------------------|--|
| Type of vessel: | Patrol, search and rescue vessel |
| In survey to: | Maritime New Zealand |
| Home port: | Wellington, New Zealand |
| Owner: | New Zealand Police |
| Operator: | New Zealand Maritime Police |
| Designer: | Teknicraft Design, New Zealand |
| CAD software: | Maxsurf, Rhino, Autocad |
| Builder: | Q-West Boatbuilders |
| Construction material: | Aluminium |
| Length overall: | 18.6 metres |
| Length waterline: | 15.7 metres |
| Beam: | 6.9 metres |
| Draught: | 750mm |
| Main engines: | 2 x MTU 8V2000 M92, each 810kW at 2,450rpm |
| Propulsion: | 2 x HamiltonJet Waterjet HJ403 |
| Steering and controls: | HamiltonJet |
| Cruising speed: | 30 knots |
| Range: | 500nm |
| Fuel capacity: | 4,700 litres |
| Fuel consumption: | 8.9 litres/nm |
| Freshwater capacity: | 600 litres |
| Crew: | 2 |



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