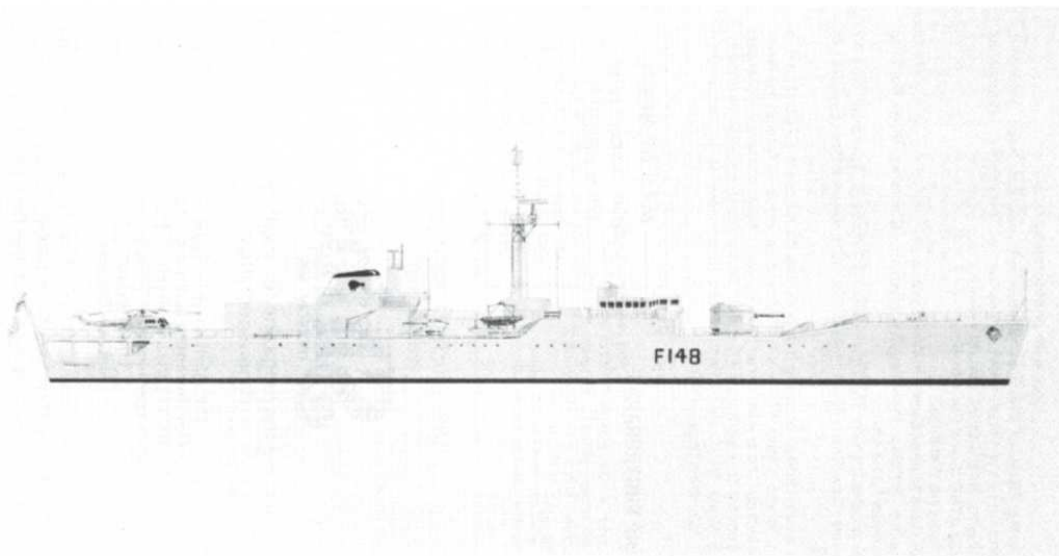


## H.M.N.Z.S. Taranaki – the first jet propelled Type 12

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By Richard Osborne

The Royal New Zealand Navy has awarded a contract to Vosper Thornycroft for technical aid covering the extension-of-life conversion of the Type 12 Rothesay class frigate Taranaki. This contract, worth approximately £20 million, involves the design for the major conversion from steam to gas turbine propulsion.



^A drawing of H.M.N.Z.S. TARANAKI as she will appear after conversion. (see article p 162) (Supplied by Vosper Thornycroft)

Taranaki was laid down in 1957 by J.S.White & Co. Ltd., at Cowes, Isle of Wight, launched on 19/8/59 and entered service on 28/3/61 and is a sister ship of Otago which entered service in 1960. Taranaki displaces 2144/2557 tons, measures 112.8 x 12.5 x 5.3m and is powered by two sets of English Electric geared steam turbines which develop 30,000 shp and drive two shafts to give a top speed of 30 knots. Taranaki and her sister have spent much of their service lives armed with one twin 4.5in. gun mounting forward of the bridge, a quadruple launcher for Seacat surface-to-air missiles on the aft superstructure, two single 20mm. guns abreast the bridge, two Limbo A/S mortars aft and two Mk.32 triple torpedo tubes for A/S homing torpedoes. The electronic outfit included types 293, 277, 978, 275 and 262 radar sets in addition to types 177, 170B and 162B sonars. Both ships were fitted with enclosed foremasts in the late 1960s

Otago and Taranaki have been in service for over twenty years and have not had a significant half-life modernisation and consequently are no longer up to modern standards. In 1979 Taranaki was recommissioned from the ready reserve as a dual purpose training and patrol ship for the 200 nautical mile economic zone. Prior to recommissioning for this role the Seacat launcher was replaced by a Mk.V twin 40mm gun mounting and the two Limbo A/S mortars were removed.

Like most navies the RNZN has difficulty in obtaining the money necessary for the one-to-one replacement of elderly frigates by modern ships which may cost as much as £150 million apiece. Consequently, they have chosen to spend some £20

million on a refit to extend the useful life of an obsolescent frigate. The philosophy behind such refits is to try and replace as much obsolete electronics as is practically possible with modern fire control and search system as well as fitting modern weapons where possible. Thus, the twin 4.5in gun mounting forward will be retained, although its fire control system is likely to be updated, and the armament will be completed by two single 40mm guns mounted on either side amidships. One major improvement will be the installation of a flight deck and hangar aft for a Westland Lynx helicopter. By far the greatest change will be the replacement of steam turbines by Rolls-Royce Tyne gas turbine engines incorporating a GEC gearbox with a Franco-Tosi reversible hydraulic coupling. The installation of the large air intakes and squat funnel, which are necessary for the gas turbines, aft of amidships and the addition of the flight deck and hangar will cause a marked change in the frigate's appearance. During this refit it is intended to provide increased and improved living accommodation in the ship. It is reported that upon completion of the design work, Vosper Thornycroft will purchase, on behalf of the RNZN, all the materials and equipment required to enable the conversion to be carried out by the RNZN in Auckland dockyard.

It seems likely that the objective of this refit is to convert Taranaki into an effective Offshore Patrol Vessel, Thus, her gun armament will be more than adequate for the task, while, the provision of the helicopter will give her the ability to react rapidly and effectively to events that may be over 100 miles away from the ship. In addition to reducing reaction times, the installation of gas turbines will reduce manning levels and maintenance both of which are important factors in today's cost conscious world.