BY AN OLD HYDROGRAPHER

Resuming New-Zealand Charting After World War II

After World War II, ship owners pressured the New Zealand Government to resume charting of coastal waters by the Royal Navy. Ships were now larger and most charts were a hundred years old. The Government approached Britain, which declined but kindly offered assistance to set up a new hydrographic service. The New Zealand Government and the Navy Board agreed that surveys must be resumed and that the Navy should undertake them. Here there were competent officers to train as hydrographic surveyors, a disciplined organisation and a large enough crew to be able to handle the ship, six boats and two 72ft Survey Motor Launches.

In spite of having two cruisers and six frigates, the navy could not find a suitable ship locally. Fortunately, the Australian Navy had a survey ship decommissioned in Fremantle. She was a River Class frigate, HMAS *Lachlan*, built in early 1945. The Australians offered to loan Lachlan to the RNZN for three years, while a purpose-built ship could be constructed. And better still, they could lend three surveying officers to accompany her.

The Royal Navy supplied as Commanding Officer, Cdr.J.M. Sharpey-Schafer, who had served in the Endeavour in 1939 in NZ, and as his 1st Lieutenant, Lt.Cdr. G.P.D. Hall who was later to be the Hydrographer of the Royal Navy. With them were the ratings, CPO 'Dodger' Long, as Chief Survey Recorder, and several Able Seamen SRs.

Lachlan arrived in Auckland on 2nd November 1949. Sharpey-Schafer was already here and had briefed the Devonport Dockyard of his conversion requirements. The most evident of these were the removal of the 4" gun and gundeck from the fo'csle, and all things gunnery, and the building of a massive Survey Chart Room on the after end of the upper deck. Sharpey-Schafer had enormous energy, so what on arrival was an empty ship sailed for surveys a fortnight later, and so began the new Hydrographic Service.
With the ship was a team of artisans to finish the conversions, and particularly to fit out the new chart room. The Captain's cabin was built in the 'Squid' handling room and a few creature comforts found their way into the wardroom and the ratings' living spaces. The complement was five Surveying Officers, two prospective surveyors, an Engineer, a Supply Officer and one or perhaps two, Wavy Navy or Merchant Service Officers for watch-keeping purposes. The 120 ratings had mess-decks and hammock accommodation.

Lachlan had a length of 301ft, breadth 36ft, draught 16ft and twin screws, giving a top speed of 19 knots. The bow had a very fine entry. She was not 'pretty' but instilled affection with the passing of time.

Our task was to re-survey the coastal waters and harbours, in priorities assessed by the NZ Hydrographic Committee chaired by the C.N.S. - the Navy's operating authority for survey ships. This committee was made up of government, navy, maritime, land and scientific authorities. The length of the coastline concerned is 3,050nm, which is similar to that of the British Isles. To support the work the country had a population of 2 million people (which has recently been doubled). It was thought that the task might take 25 years but the weather factor and other requirements decided otherwise.

The first survey was to examine a part of Cook Strait and, incidentally, to show off the ship in the Capital, in addition to settling down and getting used to the wind. After a few weeks the ship moved south to start the Foveaux Strait survey, probably with some dismay at the sight of the macrocarpa trees growing at 70 degrees from the vertical. It would probably have been the most difficult survey of all. Sharpey-Schafer commented in a report, that the area was as bad as South Georgia, when the ship dragged 9 miles with both anchors and all cable out, one night in Toetoe Bay.

When the strait was unworkable the ship was anchored right in the middle of Bluff Harbour, mainly to indicate that there would be no leave whatsoever and the working hours would be as if we were at sea. Three boats would survey during all the daylight hours, then spend the evening 'inking in' the results. The remaining surveyors, including the 1st Lt., would spend similar hours at the calculating desks fighting logarithms or drawing fair-sheets. Sharpey Schafer was always present.

The Department of Lands & Survey had just completed a geodetic survey throughout the country, so the new 'Trig Stations' were of invaluable assistance and the ship and the 'L&S' formed a happy liaison.

For chart production from the surveys, Sharpey-Schafer brought out two experienced cartographers from Taunton, the 'factory' of all Admiralty charts. We were well served by the excellence of the published charts. They started off in accommodation within Lands & Survey, which served well for three years, but in 1953 moved to Navy Office in Wellington to establish the Hydrographic Office. As the number of charts increased, more staff was required for maintenance of the published charts. Over the years, nine cartographers were sought, mainly from Taunton.

During Sharpey-Schafer's two and a half years he had firmly established the RNZN Survey Service and published an extraordinary number and charts. His infamous 1951 Christmas Card, which had a large open-out section, showed one of Captain Cook's charts, followed by a diagram of our areas surveyed and reductions of some of the seven coastal and four harbour charts, along with the names of those assisting. Quite historic, but he had sold a service to marine interests and they loved him for it.

In mid-1952 Cdr. C.C.Lowry RN took over, changing some of the practises, including the scales for the surveys. We still worked at a frantic pace but Lowry would sometimes come to the wardroom to entertain us with his musical saw!

Then in 1955 came Cdr. G.S. Ritchie DSC, RN. later to become President of the International Hydrographic Bureaux. He realised that a frantic pace of surveying was not the best for man or the survey, and he throttled back a fraction to where we could live again. Ritchie, as we all know, loved life to the full. The result throughout the ship was that every one worked harder than ever so as not to let the man down. They were good days.

In 1957 Cdr. F.W.Hunt MBE, the last of the RN officers to take the ship, took over just as we were about to enter the electronic age. Up until now all work had been done by sextants, beacons, tautwire, primitive radar and wet paper echosounders. We managed to get one of the first Tellurometers Systems, for measuring distances ashore, up to 40 miles. At the same time Lachlan was fitted with Two Range Decca (2RD), which gave us the ability to measure ranges up to 150 miles from our two slave stations ashore, and what is more could be used 24 hours a day, at 171/2 knots. No more anchoring for the night!

It was in Hunt's time that New Zealand became a full member of the International Hydrographic Bureau, the seal of approval on our work, which was pleasing.

Then in February 1960 our first NZ officer, Cdr. W.J.L.Smith DSO took command. Nothing fell apart; the 2RD churned on, night and day. By this time the work of surveying had settled down, the ship ran dutifully with little interference from the rest of the navy and we had the equipment we needed. Over the years there was an exchange of survey officers, usually for two years at a time, between British, Australian and New Zealand counterparts. This was of inestimable value for the exchange of techniques and expertise.

In 1962 there was another highlight when Smith handed over the ship to go ashore to take up the appointment of 'Hydrographer RNZN'. (The previous RN Commanders had held the title of 'Director of Hydrography', on CNS' Staff, and Commanding Officer, Lachlan).

About this time, replacements for the three survey boats were built in the Dockyard, to Admiralty design. The six previous boats had been a motley lot, all different, all on radial davits, dangerous in a seaway. With the 7ton survey boat, four relieving tackles were needed to hold her fore and aft. The three heavy boats were hoisted on manilla falls, which had to be led through blocks to the warping drums on the anchor windlass on the foc'sle. It worked, but it took time and effort to hoist all boats and bring them inboard. During the mid-life refit we were blessed with quadrantal derricks with electric motors.

About the same time, a large flight deck was built above the quarterdeck for hired helicopters. By now the ship looked totally different to the one that had left Australia. The Australians had built new ships and were only too pleased when we offered to buy Lachlan at scrap value. The offer was accepted, which was just as well because Naval Stores couldn't find the 4inch gun mounting and deck.

During the winter in NZ the ability to progress with surveys is seriously restricted. On the other hand, NZ has responsibilities for Western Samoa, Tonga, Cook Islands and several others. So it was agreed that the ship should progress with work in these islands, plus some in Fiji, at British request. So for six weeks every year the ship's company had some respite from home waters and the islands shared the benefit. Whilst up there one refuelling was needed, in Suva or Tahiti for a couple of days. No one grumbled.

In 1975 Lachlan was paid off due to boiler age and a hard life. The promise of a new ship in three years didn't eventuate, as was to be expected. However, Prime Minister Muldoon noted that the Government owned a passenger/cargo ship coming available and which looked like the 'Yard' ship which was being proposed. Why couldn't it be converted? The surveyors found this an easy argument to shoot down. But when pen was put to paper it was not so easy to refute. So we took the ship, the Moana Roa, out for a day to give it a hard time and prove it was unsuitable. We had to give the decision on the way back to harbour. It was 'Yes', providing the conversion would include controllable propellers, passive roll stabiliser and conversion of No.2 hold into workshops and accommodation. A large chartroom had to be built behind the bridge, plus a flight deck and hangar. In Wellington they said 'Yes'.

In 1975 the Moana Roa became HMNZS Monowai, after the armed merchant cruiser, was sent to the makers in Scotland and came back again two years later. The conversion was thorough, and being much cheaper than a new hull we could afford to set her up with a superior survey outfit. She had Atlas and Raytheon sounders, Sidescan sonars, HiFix/6, Trisponder, Satellite Navigator, a Hydroplot plotting table, and all brought together with an automatic Data Logging System.

She was equipped with six boats, including a 'Seatruck' for landing the Land Rover. Helicopter capability was for a Westland Wasp, with an extendable hangar. Not only was she a large survey ship, but she could fulfil a number of other roles. Her length

and draught were similar to Lachlan, but her breadth was ten feet wider and her displacement 21Ú2 times greater.

Monowai carried on where Lachlan had left off. Apart from hydrographic work, she undertook surveys to find a route for telephone cable linking Australia and New Zealand with Canada, now known as the ANZCAN cable. She undertook many tasks, but the most notable SAR incident was in the winter of 1994 when the ship participated in what became the largest SAR operation ever mounted out of New Zealand, rescuing eight people from three racing yachts in violently stormy seas. The ship and her company received commendations and other awards.
On decommissioning in 1998 it was said that Monowai “had become well known around the New Zealand coasts during her twenty years of service. Her first survey took her down to Fiordland, and that was to be the area in which she finished her career. In that time extensive areas of coastal waters and parts of the South Pacific Ocean had been charted. During her two careers of services to New Zealand, Monowai had steamed a little over a million miles, almost equally divided between merchant and naval service”.
The 50th Jubilee of the Royal New Zealand Navy’s Surveying Service was celebrated in October 1999, with the achievement of virtually all coastal waters and commercial harbours being charted. Re-surveying and surveying the Sounds, inlets, further harbours, New Zealand’s Southern Ocean islands and the northern Pacific Islands, together with periodic upgrading of all charts, will make necessary a professional hydrographic service for a very long time yet to come.

Further Reading

- ’This Stern Coast’ by Rear Admiral J.O’C. Ross CB. Publisher AH&AW Reed, WELLINGTON. First Published 1969
- ’No Day To Long’ by Rear Admiral G.S. Ritchie CB, DSC, FRICS 1992. Publisher Pentland Press. Published 1992

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