

CHAPTER 4

Southern Activity

Development of naval communications facilities in Wellington had been under way for some time. In September, 1935, a significant advance was made when the Commodore Commanding, New Zealand Squadron [CCNZS] addressed the problem of training civilian Post Office operators. In a letter to the Post Office Telegraph Department, the Commodore "considered that the best way to acquire a knowledge of our syllabus is by practise and it is suggested that procedure exercises should be conducted about once a month by HMS Philomel until the Post and Telegraph operators are familiar with the essentials of their naval duties. It is also suggested that the radio station should be exercised in war routine for a period of 24 to 48 hours during March 1936.

"I enclose one copy each of the following code books which should be issued to the Wellington Radio Station for instructional purposes:-

O.U.537111935 Operating Signals

O.U.5391 Naval Callsigns

O.U.5433 Auxiliary Vessels Wireless Signalling Instructions.

"During the period September 9 to September 13, Philomel is not to work any routines with Defence Headquarters W/T station. All signals are to be passed via Wellington Radio

Forward Thinking

Earlier, in a quite remarkable piece of foresight, a 500W transmitter had been installed at the Post Office receiving station ZLW, on Mt Tinakori, above Parliament Buildings. The installation of the transmitter had been the subject of lengthy negotiations between the Navy, Treasury and the Post Office. As late as May, 1937, in a memorandum to the Secretary of the Treasury on the subject of the N.Z. Naval Wireless Organisation, the Naval Secretary reported, "The Naval wireless organisation on the New Zealand Station has never been satisfactory because the authority in charge of the Naval administration in the country has no direct line of wireless communication with the units under its command and with other authorities concerned.

2. "The equipment of the existing Naval shore wireless station attached to H.M.S. Philomel is obsolete and owing to the electrical interference caused by machinery operating in the Naval Base it would be necessary to consider the question of purchasing a suitable site and installing up-to-date equipment. Action on these lines would not however produce satisfactory results since as indicated above, the station would still not be available to the direct service of the administrative authority of the Naval Forces [i.e. the Naval Board]

3. "In these circumstances it has been thought possible to enter into negotiations with the Post & Telegraph Department with a view to the establishment of a Naval shore wireless station in the existing Radio Station in peace as well as in war, noting that the NaVAL Board already pay an annual subsidy of \$500 to the Post & Telegraph Department for the maintenance of equipment at the station for use under war conditions.

4 "A general statement of the requirements which form the basis of these negotiations is set out in an enclosure to this memorandum.

5. "It will be seen that the Post & Telegraph Department are prepared to meet the Naval peace requirements provided that expenditure connected therewith is charged to the Naval Defence Vote. The additional expenditure involved amounts to \$4920 per annum of which \$3400 provides for wages of the Post & Telegraph operators, \$500 is related to increased maintenance charges, \$1020 relates to the cost of allowances payable to the Naval ratings employed on purely Naval duties connected with the wireless traffic.

6. "The Naval Board having considered every possible alternative have decided that the arrangements described in the enclosed memorandum would meet naval requirements. It would avoid the necessity of removing and re-equipping Philomel wireless station which it is estimated would cost in equipment alone about \$20,000. The naval ratings now borne for duty in the Philomela station would be appropriated to the Wellington Station and the Post & Telegraph operators who would be employed in the latter station would also form a very useful reserve of men trained in Naval procedure.

7. "As great inconvenience is caused to the Naval Board because of the lack of proper wireless facilities at Wellington it is desired to set up the new organisation as soon as practicable....."

But as soon as practicable obviously meant different things to different people. It was May 1940, before the Naval Secretary told the Minister of Defence that Treasury have now signified their concurrence. Navy were seeking Ministerial approval to install an additional transmitter at Tinakori not later than the 1st of September next so that the naval authorities in NZ may take their proper share of the Far Eastern wireless organisation and to commence operating in this organisation on the same date as the Australian Naval authorities, i.e. 1st September, 1940.

Just what this initial transmitter was and what it was to be used for is not known but it could have been the Collins Type 89 which at that time was fitted on the 8th floor of Defence Headquarters in Stout St, Wellington. The reason for this assumption is that in the 1947 Radio Equipment Return Wellington Naval W/T station reported equipment included the Type 89, a TCS for emergency point-to-point, a B28 for broadcast monitoring and an SX28 for Wellington Port Wave. This 89 was probably the transmitter installed at ZLW to replace the original unit installed shortly before the start of WW2.

The original 89 was subsequently replaced by a Redifon G425 which in turn gave way to a later higher-powered version, a Redifon G40B incorporating remote frequency selection, though just why this was considered necessary with resident shift-keeping Post & Telegraph engineers on site remains a mystery. Anyway, in 1966 the G40B was replaced by a 603, together with a 691 for UHF and a B40D receiver. Each of these units were located at Tinakori and were supposed to be controlled remotely from the N.C.C but this remote control was limited to being remotely keyed. Frequency control involved ringing the duty ZLW supervisor and asking for the 603 and/or the B40 to be tuned to the new frequency.

Buzzer Bottlenecks

Back in 1941 another problem was looming when the Naval Secretary had the honour to inform the Minister of Defence....."that consequent upon the steady expansion of coded naval wireless traffic since the beginning of the war the existing buzzer telephone line between Wellington W/T station and Navy Office has become inadequate to handle the work and has become a bottleneck in the naval W/T communications.

2. By the installation of teleprinters on this line it is anticipated that naval telegraphists will in due course be largely released from this particular work since teleprinters can be operated by women...

3. In the interim it is proposed to install a duplicate buzzer line at a cost of \$3.00 (installation charge) and \$27.80 (annual rental).

Following Japan's entry into the war in December, 1941, the numbers in the Communications Branch increased significantly. In Navy Office, which was for an extended period the centre of communications in N.Z., a large civilian staff supervised by Naval personnel handled an increasing level of worldwide traffic. The cipher and coding offices under naval control were initially linked with the Post & Telegraph W/T station at Mt Tinakori in Wellington and were an important part of the worldwide British chain of Naval communications. In Navy Office, a staff of skilled operators, initially recruited from the Post & Telegraph Department, operated teleprinter circuits to Auckland Dockyard and the Auckland Combined Headquarters at Mt Albert, the receiving station later built at Purewa, HMNZS Cook, the General Post Office, Wellington, a Morse line to Lyttleton and after 1942 to the fledgling Waiouru W/T. Later, most of these circuits were to be handled with equal efficiency by Wren operators from the fledgling Women's Royal New Zealand Naval Service.

Over these circuits passed all overseas traffic, a large amount of high priority signals on the New Zealand section of the centrak and South Pacific direction finding net as well as an increasing volume of administrative traffic within New Zealand. Until early 1943 messages for the N.Z. cruisers "Leander" and "Achilles, the Armed merchant cruiser "Monowai", "Matai", "Kiwi", "Tui" and "Moa" were all sent from ZLW, Mt Tinakori, using the Naval callsign ZLP. The messages were generally transmitted as they came to hand and were usually repeated again four to 8 hours later, this interval being generally dependent upon traffic loading and the desirability of timing the transmissions so they occurred once during daylight hours and once during night hours.

Later on, an "Intercept" system was introduced. This involved a number of shore stations in Australia and N.Z. and was used by ships in both navies as well as some Dutch and Free French ships. The shore stations involved were ZLP [Wellington], VHB [Belconnen/Canberra], VHM {Coonawarra/Darwin}, VHP [Perth]. As an example of how the system worked, if we consider a signal from the New Zealand Naval Board, NZNB to the cruisers Leander and Achilles, with Achilles being somewhere near the Solomon Islands and Leander somewhere near Tasmania. The signal would be sent to Belconnen/Canberra and to Darwin with instructions for one or both stations to "repeat back" the message to Wellington. This action would involve a number of frequencies being used by each shore station to provide a fair chance of the message being intercepted by the ship.

As an example the preamble of the message would have the form VHB3/8 VHM2/4 v ZLP6/9 – NR AZ 123 – G – P – 7AB9 X4Y8 141347Z GR74 = 83624 8301 8793 etc = 1535M/08 K

In the above example it would have been highly likely that each ship would have had two or three transmissions it would have been able to listen to. As an aside, it should be realised that the radio equipment in the ships concerned was so crude as to be almost beyond belief

By this time, the early 1940s, most N.Z. houses had a wireless (later called radios) which had been purchased from the "Farmers Trading Co" or "the Lamphouse" or "Smith & Browns. They were named "Phillips", "Mullard", "Philco", "Airzone", "Columbus" and the Farmers Trading Company special, the "Golden Knight". These were mainly 4, 5 or even 6 valve superheterodyne receivers and were vastly superior to anything fitted in the ships.

The demand for trained Communications Branch ratings could not be met from the two green huts on the Philomel waterfront which led to the creation of a naval barracks and classrooms for some 200 trainees as HMNZS Tasman in Lyttleton. A second signal training school was also established in Dunedin where the first class of Signalmen entered in June 1943.

Despite the success of these two supplementary training establishments the training of Telegraphists was later transferred to HMNZS Tamaki on Motuihe and Signalmen training transferred from Dunedin to Lyttleton. An interesting corollary of the communications activity at Dunedin came to light five years later, in October 1948 when NA10/7/9 recorded that "At the request of the Navy, the Post & Telegraph Department installed some 500kHz radio equipment at Dunedin in 1938. The equipment has in fact been completely forgotten by both P & T and Navy since the cessation of World War 2. Request information regarding its disposition." Unfortunately, there was no subsequent entry in the file so we may never know what became of the equipment.

Returning to more serious matters, the enormous increase in staff was creating domestic problems. Arrangements had been made with the Public Works Department to provide living accommodation including bunk-houses, cook-houses and toilet blocks for the staff at the Wellington wireless station. The Naval share of the cost of this expansion was listed as \$675.70 – but all was not sweetness and light, particularly the latter.

Within six months of commissioning, a plea to the Commodore Commanding the New Zealand Squadron complained that "The present single emergency light fitted in the Naval rooms at Wellington W/T Station is inadequate from a Naval point of view and the situation would be better met by the provision of three separate lights so fitted to illuminate (a) the H/F receiving position, (b) the M/F receiving position and (c) the Leading Hands desk. There appears to be no objection to these three lights being separately of lesser candlepower than the present single light in order not to increase the drain on the battery from which they are supplied. It is submitted therefore that this arrangement may be approved and the P & T Dept may be asked to provide these emergency lights each separately controlled by its own switch, available instantly at all times and positioned as explained in paragraph 1."

Perhaps the demand for better lighting was occasioned by the news that Navy Office had requested the Army to supply forthwith to the Commanding Officer, R.N.V.R. Wellington Division, to be held in safe custody by him for use in Wellington Naval W/T Station in emergency – Revolvers, 5 in number and ammunition for 200 rounds!