

A History of New Zealand Flight Calibration (1947 – Present)

The Calibration flight of the Ministry of Transport's Civil Aviation Division (CAD), was first set up in May 1947 at Paraparaumu Aerodrome when the Civil Aviation branch of Air Dept took over the task of flight checking NZ's navigation aids, a job done up until then by RNZAF personnel. The Calibration Flight (commonly referred to as "Cal Flight") had the task of precisely checking a wide range of beacons and navigation aids dotted throughout NZ and the islands of its immediate Pacific neighbours.

For 24 years, Cal Flight pilots flew veteran DC3s on marathon ocean-hopping missions, logging hundreds of thousands of air miles on two aircraft that had cut their teeth even before WW2 ended.

The first Chief Pilot of the group was Captain Arthur Hewitt, a former RNZAF Hudson bomber pilot who had flown many missions around the Pacific, and in peace-time was seconded to air navigation checking work for the Air Force in Lockheed Hudsons and Airspeed Oxfords.

He started his new job for the Civil Aviation Division using hired National Airways Corporation DC3s during weekend "off peaks", but after a year the demand for the service had increased so much that more pilots and aircrew were needed.



By 1950, even though the pilots flew "flat stick" all weekend in hired DC3s, the growing navigation network was more than Cal Flight could handle, and as a result the department bought its first DC3, registered ZK-AXS.

The aircraft was the former flying battle base used by Lord Mountbatten, Supreme Allied Commander, South-east Asian operations from 1943-46.

Bought from RAF Far East Command for \$8000, the first DC3 still contained Lord Mountbatten's special facilities, a cocktail cabinet, refrigerator, cookers and leather couches, when it was handed over and flown to NZ. Refitted and given NZ registration ZK-AXS, it was soon flying around the Pacific on calibration checks for NZ, Fiji and Norfolk Is.



But the workload continued to build and another DC3 (ZK-AUJ), and more pilots, were added to Cal Flight over the next 12 months.



A new Chief Pilot, Captain Arthur Bayly, joined Captain Hewitt's team in 1953. Captain Bayly was another RNZAF pilot, who had flown fighters in the Pacific during the war and spent five post-war years as an inspector of air traffic control for the Air Dept.

At first the Cal Flight pilots handled many extra jobs, such as aerial mapping, VIP flying, supply drops for Campbell Is meteorological staff, aerial photography, whale spotting for the Marine Dept, search and rescue, and even a stint of regular feeder airline work in the Pacific under contract to TEAL.

But pressure of navigation and checking gradually built up as more countries called for the service, and NZ's own network of aids expanded. The Cal Flight was the only non-American organisation in the world entrusted with the task of maintaining a calibration service for United States navigation aids in the Pacific

Calibration flying later became too big for the old DC3s, and the flight's biggest milestone saw two specially equipped F27 Friendships being bought at a cost of \$5 million in 1972, and flown to NZ by Captain Arthur Bayly and his Cal Flight boys.

This chalked up another first by being the first organisation to order F27s specially designed with a highly complex equipment layout, starting a fashion which aroused the interest of a number of other nations involved in air navigation surveillance.



The daily work roster for the “Cal Flight” pilots living in and around their Paraparaumu aerodrome base near Wellington, was almost as varied as that of an international airline.

Eight times a year they headed their aircraft north into the Pacific to the coconut and coral islands of Fiji, New Caledonia, Tahiti, the Cook Is and Samoa to carry out calibration and inspections of the beacons and navigation aids installed in these countries.

On these tropical operations, they flew early morning missions to avoid as much as possible the bumpy conditions experienced once the air heated up.

Even in an F27, it was not much fun trying to work complex electronic calibration gear, sextants and oscillograph pen recorders when the aircraft was being flung around the sky in turbulence.

The two F27s (ZK-DCA & ZK-DCB) were found insufficient to cope with Pacific and local work and pilot training, and a third Friendship (ZK-DCG) joined the fleet in 1972, bought from All Nippon Airways of Japan. It was refitted in Christchurch.



However, this F27 had a more varied life while in NZ and in addition to flight calibration and pilot training work, it was leased to NAC in 1974, to Air NZ in 1979 and to Mt Cook Airlines in 1981, and then returned to the CAD at the end of the lease in November 1981. However, at this stage it was decided that the F27 was no longer required and as a result it was sold in 1982 for use by the Pakistan Navy.

At the height of the Cal Flight operation, the Cal Flight team comprised 12 pilots, three navigators, three flight radio engineers, three flight maintenance engineers, two aircraft

cleaners and two clerks, all based at the Cal Flight operations office (“ops office”) and workshops at Paraparaumu aerodrome.

In April 1988, a review of the NZ civil aviation safety network was carried out and resulted in the publication of the Swedavia-McGregor report. The report included recommendations for improving aviation safety and the regulatory framework, and it served as a foundational document for the Civil Aviation Act 1990 and the subsequent establishment of the Civil Aviation Authority (CAA). As a result of the changes recommended in the report, flight calibration and inspection services were eventually transferred to the Airways Corporation of NZ (ACNZ), which was a new State Owned Enterprise (SOE) established in 1987 as part of a broader devolution of air traffic and related services from the CAD to Airways Corporation.

The first two F27s that had been used for calibration and inspection work were sold in 1992 for use by the Pakistan Navy. The earlier DC3s ended their operations in 1970 and 1973. ZK-AXS, suffered a landing incident at Paraparaumu in 1970 and was written off, and ZK-AUJ was sold in 1973.

Airways Corporation of NZ (now known as Airways NZ) initially used leased commercial aircraft and portable equipment for the calibration and inspection work, and in 2017 they bought a Piper PA-42-1000 Cheyenne, registered ZK-FIS to carry out their calibration and inspection work in NZ and in the Pacific, and the aircraft remains in use today for this work.

