



## 2. Military and civil aviation: Early development & links

Civil aviation in Australia and beyond would not be where it is today without developments and experiences in military and civil heritage in Australia and overseas. This session aims to explore the history and heritage of Australian aviation through papers exploring links between civil and military heritage both overseas and in Australia.

Session Convenor: Rosemary Hollow

### 1. Innovations in aviation navigations: The Australian distance measuring equipment

*Roger Meyer- Civil Aviation Historical Society Inc.*

A little-known field of Australian innovation has been the provision of visual and radio navigation aids for use by civil aviation. An example of the former is the Tee Visual Approach Slope Indicator System (T-VASIS), and the latter includes the Microwave Landing System (MLS).

This paper explores one such example of Australian innovation; Distance Measuring Equipment (DME). It was developed using the combined resources of science (CSIRO), the manufacturing industry (AWA) and the Department of Civil Aviation (DCA). Australia was the first country to develop a DME system for domestic use, and was mandatory in all regular public transport aircraft between 1955 and 1995.

How did this collaboration come about; how successful was DME as an engineering and operational achievement, and what further innovations did this model lead to?

## **2. Flight logs, terrain, tempest and trials: NSW Air Ambulance 1967-82**

*Bronwyn Holland- University of Technology Sydney Honorary Associate FEIT*

The post-war era saw a boom in aviation in Australia with a turn to training by returned service personnel, an abundance of decommissioned aircraft and a proliferation of regional air services. Flight pioneer Nancy Bird Walton and a number of influential public figures championed the founding of an air ambulance service in NSW. How this service evolved can be traced through flight logs and personal records of a pilot blooded in regional and remote area air services, and experienced in national and international commercial aviation. The challenge for the Air Ambulance flight crews and administration, was not confined to navigating difficult terrain and bad weather across the state to bring ill or badly injured patients to specialist treatment and deliver them safely home again. There was perennial funding constraint, public-private tensions and sometimes destabilising political intervention. Nevertheless the NSW Air Ambulance quickly became a service in high demand, celebrated by families and communities across the state who could count on its support. The record dates from the beginnings of the NSW Air Ambulance, when it had just one Beechcraft Queenair B80, VH-AMB. This aircraft is now mid-flight, complete with handwritten flight logs, in the Transport Gallery of Sydney's Powerhouse Museum.

## **3. From the same root - the founding of Australia's military and civil aviation: 'The emergence of a government policy relating to civil and military aviation in Australia, 1918-1920'**

*Leigh Edmonds- Federation University*

It is no accident that the two branches of aviation in Australia, civil and military, were formed within a week of each other; the Civil Aviation Branch of the Department of Defense on 28 March 1921 and the Australian Air Force on 31 March 1921. These two branches took root, growing from discussions held at the highest levels of the Commonwealth government before the end of World War I and leading to decisions regarding them taken in the second half of 1920. Almost a century later, both have grown to become multi-billion dollar enterprises central to Australian culture and security.

Using documentary evidence, this paper discusses the reasons for such a close association between Australian civil and military aviation, rooted in the response to three issues confronting the Commonwealth government in the second decade of Federation - national defense, national development and finance. The experience of the war had taught the Commonwealth government that aviation had become a necessary component of national defense and civil aviation promised to play an important role in the great project of national development. However, facing both these proposals was the problem of paying for them.

#### **4. Flight arrives to the Tuggeranong valley**

*Rebecca Lamb- Community Group, Minders of Tuggeranong Homestead Inc*

From the arrival of Andy Cunningham's Genaire Tiger Moth in the early 1920s, aviation took an upwards turn in the quiet rural Tuggeranong valley. Andy Cunningham's flying escapades became the stuff of local legend and his brave attempt to complete the flying race from Sydney to England, ended in almost disaster. Yet undaunted, he returned to Australia and to Tuggeranong to continue his thrilling aerial maneuvers in his flying machine. The Tuggeranong valley became the practice ground for aerial target bombings by the allies during the early part of WW2 then a flight training ground for the Canberra Aero Club right up to the 1970s. The beginnings of flight and Tuggeranong area are closely linked. I'd like the opportunity to expand on these themes on this occasion.

#### **5. Connecting the British Empire 1932 to 1971 - Bringing the World to the Trucial States**

*Dr. Saif Al Bedwawi- University of Sharjah*

*Hafsa Tameez- Management Office of Sharjah: Gateway to the Trucial States*

The aim of this paper is to discuss the role of Sharjah Airport in connecting the British Empire as far as Australia from 1932 to 1971.

In the early 1920's, Imperial Airways began its iconic London-India air route. Along this two-day journey, the airlines needed an overnight landing stop and rest house for its passengers and thus they came to Sharjah, a self-governed Sheikhdom in the Trucial States, now one of the seven emirates of the United Arab Emirates. What followed next was a saga that brought the world to the Trucial States through Al Mahatta, the first civil airport in the region that still exists today as a museum, and sparked a movement towards modernity that radically changed the face of Sharjah and put it on the world map. Often referred to as 'The Forgotten Theatre', this imperial air outpost survived economic and political changes, the Second World War and its aftermath, and the birth of a nation. It was a haven in the desert for people in transit, a capstone in the sea and land networks that existed in the region historically, and a critical strategic connection between East and West during the dawn of aviation in the Gulf. Modernity came to Sharjah by air and left echoes of the development it instigated that can be felt in the Emirate today.

## **6. From Flying Fowl House to Spirit of Kokoda: The long and continuing journey of Papua New Guinea's Ford Trimotor**

*Andrew Connelly- PNG National Museum and Art Gallery*

Upon entering the gate of the PNG National Museum, next door to Parliament House in the Waigani capital district of Port Moresby, one immediately encounters three historical aircraft, most prominent of which both visually and in terms of heritage is a 5-AT-C Ford Trimotor. Built in 1929, this aircraft had an illustrious and varied career across half the globe. A glamorous early life included appearing in the 1930 Paris Air Show and operating in east Africa as the Star of Tanganyika owned by the Earl of Lovelace. The aircraft was brought to New Guinea in 1935 and became a workhorse for a burgeoning colonial society, carrying passengers and cargo throughout the Mandated Territory until the outset of WWII when it was commandeered into RAAF service. In 1942, the Trimotor bogged on muddy ground and flipped over at Myola Lake whilst delivering supplies to the men fighting on the Kokoda Track. It lay there for 37 years before being airlifted to Port Moresby in 1979. This aircraft is a touchstone not only for colonial and wartime heritage, but also for present-day land issues in the capital. It also remains a lightning rod for heritage issues in PNG, with the Myola landowners continuing to press demands for its return and for compensation.

## **7. For Defence Purposes: the military influences on civil aviation in Brisbane in the interwar years**

*Valerie Dennis- National Trust of Australia (Queensland)*

From its administration within the Department of Defence to the wartime backgrounds of its pilots and aero company managers, civil aviation in Australia developed in an entrenched establishment of men bound by the shared military experiences of the past and a budget-restricted preparedness for the future.

In 1922, three former military pilots chose 34 hectares near the Brisbane River at Eagle Farm to be acquired for defence purposes as the city's first civil aerodrome. There, the Civil Aviation Branch constructed one hangar while QANTAS, venturing in from the bush, built another. A handful of military-trained pilots undertook joy flights, air-taxi services or provided flight instruction, occasionally to women. All seemed well until the wet season of 1927 turned Eagle Farm into a morass.

Acquired for defence purposes as the replacement for Eagle Farm and boasting its two, now relocated hangars, Archerfield Aerodrome celebrated its 1931 opening with an aerial pageant. Following the 1939 declaration of war and, despite the decade's gradual growth in civil aviation, Archerfield's hangars were camouflaged and its pilots, engineers and training aircraft dedicated to the support of the Royal Australian Air Force. The defence purpose of civil aviation in Brisbane had been resolved.

## **8. From Flying to Spying: the Department of Civil Aviation in Portuguese Timor, 1941-42**

*Phil Vabre- Civil Aviation Historical Society Inc.*

In January 1941 the British and Australian Governments arranged to divert the Qantas Empire Airways flying boat service through Dilli, the capital of Portuguese Timor, in order to head off growing Japanese influence in the colony. At the same time, the Australian Department of Civil Aviation (DCA) sent a mission to Dilli to assist the Timorese to set up a wireless station in support of the service. This in turn led to some of the strangest activities that DCA personnel were ever called upon to perform. In this paper we will see how the air service was also used as a cover for spying on Japanese activities, how a DCA officer was instrumental in facilitating the bloodless invasion of a neighboring country, and how that same officer later became a go-between in negotiations for the – rejected - surrender of Australian forces in Portuguese Timor to the Japanese.