

Technical Branch Newsletter for Spring 2021

Vale Wing Commander (ret) Noel Hadfield



The Branch Membership is very saddened over the passing of one of our founders – Noel Hadfield. Noel was pivotal in organising our bi-annual luncheons, and had the semi-official title of “Keeper of the List”, a vital role in holding the Branch together. He warmly greeted everyone attending our luncheons and handed us our name-tags (in large font, befitting the ocular challenges facing many Members). He passed away peacefully at home on 3rd May, and is survived by his wife Judith, seven children and four grandchildren.

Branch Excursion to the Ballarat AFA Branch:

Committeeman Glen Gould was instrumental in organising this trip on 19th March (and beating Covid). Glen has a family connection to that era of the RAAF Base Ballarat 1WAGS – his father-in-law Thomas George Holmes completed 1WAGS Course No 43 after which he was posted to the United Kingdom for service with RAF Bomber Command. He moved up to the four engine Lancaster bomber as the Wireless Air Gunner – a position always a target for the German night fighters (“*nachtkampfflugze ug der Luftwaffe*”). Luckily, he survived the War.

Glen’s grandson Lachie was presented with a framed certificate detailing his great-grandfather’s service.

Another piece of history, with close connection to Air Force Communications Engineering Cadets at RMIT has also emerged via the Ballarat Branch website co-ordinator Janet Bates, detailing the life and career of the well-remembered RMIT lecturer Air Force Wing Commander (ret) by the name of James Eric Reynolds. He tried to train wannabee engineers in the science and art of precision soldering – a practical and essential part of communications and electronics engineering. The writer came to know the Wing Commander in 1961 as a PMG Cadet Engineer, along with a few Air Force Cadets. On observing our initial attempts at precision soldering he remarked that we were in the wrong institution – the Department of Butchery at the William Angliss Food Trades School would be more appropriate! He prayed none of us (especially the Air Force Cadets) would be held responsible for the future downing of a Mirage. The Wing Commander’s story – and is quite fascinating - is at 1wags.org.au. Highly recommended, and would make an excellent documentary, with references including wireless communications with Charles Kingsford Smith and top secret wartime coastal Australia radar installations. Also, note the Dedication Ceremony of the Number 13 Radar Station Cape Otway for 23rd October – one of WGCDR Reynold’s projects during WW2 - refer 1wags.org.au and the Ballarat Branch Newsletters for further details.

Zooming-In On Committee Meetings:

Due to that pesky virus, in recent times, we have been unable to enjoy meeting at the Royal Mail Exchange hotel. Like many other groups we have employed Zoom to conduct recent meetings, invoking the SOP of “hand up if you want to talk” while Chair David decided who got to yabber next. The main topic was our mid-year luncheon function at Batman on Collins (BoC). Encouragingly, the AFA(Vic) has confirmed a subsidy for the event, provided that actually happens. Once more, a quite good deal with BoC was secured, with the proviso that numbers would be limited to 50 – our thought was “we’ll be lucky” but reckoned reaching the minimum of 30 to maintain the per-head price. Unfortunately, the firm expressions of interest did not even make the critical mass of 30, so the event has been postponed to a date tbc.

RMIT is never far from the minds of those Air Force Cadets attending through until the establishment of the Australian Defence Force Academy (ADFA) in 1985. The following article describes the history of the collaboration between Air Force and RMIT, which still resonates in today’s Air Force.

THE NATIONAL DEFENCE EFFORT OF THE ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY UNIVERSITY AND THE ROYAL AUSTRALIAN AIR FORCE

The history of the collaboration between Air Force and RMIT is described on “The Interactive Wall” at the RMIT-restored Capitol Theatre in Collins Street. Bill Belton has been the major contributor of the story. The active collaboration between RMIT and Air Force effectively ceased after 1985 with establishment of ADFA, which offered undergraduate courses in a variety of fields, via the University of New South Wales. That said, the careers and mentoring influence of the pre-1985 RMIT Graduates continued well into the second decade of the 21st Century.

1939 to 1945 - World War 2

The Melbourne Technical College (MTC) made a significant contribution to Australia's war efforts by training some 20,000 service men and women (approximately one-sixth of all trained in Australia) - mainly RAAF personnel in Radio Communications, and also Aircraft Fitters and Electricians. ⁽¹⁾

These personnel were housed at several locations turned over to the war effort, including the Royal Exhibition Building in Carlton and the Showgrounds at Ascot Vale. After graduation, personnel were assigned to RAAF bases in Australia and overseas or they participated in further training, such as the then revolutionary radar technology. The Melbourne Technical College Radio School was the leading National educator in these fields.

1948 to 1975 - The RAAF Radio Apprentices (the Appys)

In 1948 the RAAF established an Apprenticeship Scheme, with apprentices at the RAAF Ground Training School at Wagga New South Wales and at the RAAF Radio Apprentice School at “Frognall” in the leafy Mont Albert Road, Camberwell, Victoria.



The Crests of the Best - Apprentice School, Diploma Cadets and Engineer Cadets

The RAAF Radio Apprentices attended the Melbourne Technical College, later becoming the Royal Melbourne Technical College, for their academic tuition towards Associate Diplomas, followed by practical training at RAAF units at (often very cold) Ballarat and later at (also often cold on Plover Plains) Laverton, Victoria. Through the Melbourne Technical College, which in 1954 became the Royal Melbourne Technical College and then in 1960 the Royal Melbourne Institute of Technology, some 655 RAAF Radio Apprentices graduated mainly from the Radio School. This was a significant contribution to the overall RAAF technical support capability with many graduates going on to complete higher level Engineering education at RMIT. Education for RAAF Radio Apprentices finished at RMIT in 1975 with all training afterwards conducted at the RAAF School of Radio at Laverton.

1948 to 1961– Radio, Communications, Mechanical and Electrical Engineering

Many RAAF personnel, having mainly graduated from the RAAF Radio Apprentice scheme, were appointed as Cadets into the Diploma Cadet Squadron (DCS) and studied Radio and Communication Engineering at RMIT. Those completing Engineering Diplomas were commissioned in the RAAF Engineer Branch as Radio and Communications specialist Engineers.

RMIT's School of Radio and Communications Engineering was the lead national faculty in this enterprise. ⁽²⁾

Another 40 RAAF personnel based at Laverton and mainly graduates of the RAAF Technical Apprentice Scheme, were commissioned into the DCS and undertook studies in the faculties of Mechanical and Electrical Engineering, which significantly added to RAAF Engineering capability.

Those completing RMIT's Associate Diplomas were commissioned in the RAAF Engineer Branch as Radio, Aeronautical, Electrical and Instrument specialist engineers, and achieved qualifying entry for Member of the Institution of Engineers Australia (MIE Aust).

1961 to 1985 - Expansion of Education for Engineering and Business Studies Personnel

This period saw a significant expansion of the collaboration of RMIT in the academic education of some 700 RAAF personnel in the disciplines of Aeronautical, Communication, and Mechanical Engineering and in Business Studies. These personnel were home based at the RAAF's Diploma Cadet Squadron (DCS), later becoming the Engineer Cadet Squadron (ECS) at Frognall, Camberwell. Some of these personnel included graduates from the RAAF Technical and Radio Apprentice schemes, with the majority being direct entry to the DCS and later the ECS. The RAAF occupied the Frognall Mansion from 1941, with the establishment of the Wireless/Telegraphy Shadow Station (aka "The Spooks"), then becoming the RAAF Telecommunications Unit after 1945.

Those completing the RMIT Associate Diplomas, and from 1973, the Degree Courses, in Chemical, Communications, Mechanical, Electrical and Aeronautical Engineering and Business Studies were commissioned into the RAAF Engineer Branch as Aeronautical, Electrical, Radio and Instrument Specialist Engineers and in the RAAF Equipment Supply Branch.

The RMIT Engineering Schools of Aeronautical, Chemical, Radio and Communications, Electronics and Electrical, and Mechanical, and the RMIT Business Studies were the key RMIT academic centres of excellence. The RMIT involvement was highly significant to the development and enhancement of Engineering and Management capabilities in the RAAF. Also, RMIT lecturers conducted subject matter tutorials at Frognall for the RAAF Cadets.

1985 to the ADFA and Vale Frognall.

The scheme which provided the RAAF with Graduate Engineer and General Officers for 25 years closed on 12 December 1985, with the closure of Frognall. From its beginnings in February 1961 as 'Detachment A' of the Radio Apprentice School, then the Diploma Cadet Squadron (DCS) from 1962, and the Engineer Cadet Squadron (ECS) from 1976, the Frognall unit administered Officer Cadets who were studying for Engineering Diplomas and Degrees at the Royal Melbourne Institute of Technology.

With the closure of the ECS, future intakes of RAAF engineer students attended the new Australian Defence Force Academy (ADFA) in Canberra. Those RAAF personnel still studying

at RMIT when the ECS squadron disbanded with the establishment of ADFA in Canberra in 1985 were then attached to the RAAF Base Point Cook.

Summary

For over 60 years the Engineering and Business Graduates from RMIT provided the backbone of the RAAF's expertise in these areas for many years, right up to the present day. They provided the skills necessary for the acquisition, specification & maintenance of aircraft and associated equipment of highly developed & advanced designs such as, initially, the Dassault Mirage Interceptor/Surface Attack 1110, the F111 Aardvark (aka "the Pig") medium range interdictor and tactical strike aircraft, the AP-3C Orion aircraft for naval fleet support, maritime surveillance, search and survivor supply and anti-surface and anti-submarine warfare. In their career senior roles, these pre-1985 RMIT Graduates guided, well into the 2nd decade of this century, the introduction of the current RAAF fleet, including for example, the F/A-18 Hornet supersonic fighter and attack aircraft, the C17A Globemaster high-wing four-engine heavy transport aircraft, the P8-A Poseidon multi-maritime mission aircraft, the EA-18G Growler Electronic Attack aircraft, and the Fifth-Generation Lockheed Lightning II F35-A multi-role, supersonic, stealth fighter.

RAAF Engineers served with operational squadrons in Australia and overseas (including Vietnam and the Middle East). Some reached senior RAAF appointments whilst others with specialised post-graduate qualifications made crucial contributions in the fields of aircraft structures, communications, propulsion, guided weapons, explosives and maintenance management.

Overall, the RAAF could not have raised, sustained or projected its capabilities through the late 20th & early 21st centuries without the contribution of this outstandingly successful Graduate education scheme, primarily supported and delivered by the RMIT.

Beyond the RAAF and in adding to the technological & management expertise of the nation, these Engineers and Managers have contributed significantly to the corporate & public sectors as well as with private industry.

Pictures at the Capitol Theatre of "The Wall", with very photogenic folks. A future Branch visit will be organised, timing dependent Covid –wise of course.



And as always, Front Line Communications are VITAL!



**“WHEN’S OUR HOT COFFEE
GETTIN’ HERE??!!”**



“Errrh.. In due course, Sir. A bit busy here at the moment....”

References:

Murray-Smith, Stephen; Dare, Anthony J. (1987), The Tech: A Centenary History of the Royal Melbourne Institute of Technology (1st ed.), South Yarra (Melbourne): Hyland House, ISBN0-947062-06-8

2. From The Ground Up. The Training of RAAF Technical Ground Staff 1948 – 1993. Coulthard-Clark, C.D: Air Power Studies Centre, Canberra, ISBN 0 642 26509 7



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We wish you all Ongoing Good Health and Happiness, and a Joyful Time with Family and Friends, now and always.

Carl Dillon, on behalf of President David Graham and the Committee.