

RECIPIENTS OF RAeS AWARDS 2022

George Watt Award - 2022

Mr Dean CRAFTS D991418 Civilian AMPU Ohakea

This award was established by George Watt to recognize outstanding technical merit which enhances the efficiency of the Royal New Zealand Air Force. The award is open to all ranks of the RNZAF, military and civilian, and is for:

- Invention of improved equipment; or
- Improvements in methods which enhance efficiency; or
- A technical paper which describes ways and means of improving technical support; or
- Improved methods leading to an appreciable advance in technical training.

The winner is selected by Air Staff who make the RAeS Division aware of the successful candidate and the reasons for the selection. This year the George Watt Award is awarded to Mr Dean Crafts.

In October 2020, Mr Crafts started a review of the Depot Level Maintenance (DLM) Programme for the SH-2G(I) Seasprite helicopter fleet. The purpose of the review was to determine the applicability and effectiveness of the current DLM programme and identify any opportunities for improvement. This review was a significant body of work, which involved reviewing every DLM servicing completed on the Seasprite fleet, understanding every maintenance task completed as part of a DLM servicing and why it was required, as well as liaising with multiple stakeholders, including TS SEA, Airbus and Kaman.

The result of the 12-month in-depth review revealed potential certification issues and opportunities to improve the entire Seasprite maintenance programme. The ultimate outcome was the implementation of an enhanced Intermediate Level Maintenance (ILM) programme for the Seasprite and the disestablishment of the DLM programme. These changes to the maintenance programme will reduce the overall maintenance requirement of the Seasprite fleet by 7000 labour hours per year, while retaining overall aircraft safety.

Since Mr Crafts has completed this work, he has started reviewing the Seasprite ILM programme while leading the development of new AMPU SOPs required for DARs compliance.

Mr Crafts' review of the Seasprite Depot Level Maintenance Programme represents extraordinary effort, with its outcomes enabling the NZDF to realise substantial cost savings and enormous maintenance servicing efficiencies. Without Mr Crafts' dedication, comprehensive analysis and technical proficiency, this significant enhancement to the SH-2G(I) Seasprite maintenance programme would not have been achieved.

Overall, Mr Crafts' outstanding technical ability has enhanced the efficiency of the RNZAF making him an ideal candidate for the Group Captain Watt Award.

Presented in Wellington
4th November 2022

Recommended for this award by Chief Engineer, Royal New Zealand Air Force

Kestrel Trophy - 2022

The Kestrel Trophy is presented annually to the Royal New Zealand Air Force Unit adjudged the most excellent by the Chief of Air Force. The size of the unit nominated does not matter, and the trophy is able to be displayed by the winning unit.

The **Royal New Zealand Air Force's Air Military Design Organisation (Air MDO)** is nominated for the 2020 Kestrel Trophy for the exceptional effort undertaken to achieve the first Defence Aviation Rules (DARs) organisational approval on 01 December 2020, whilst concurrently providing a high volume of design support to the Royal New Zealand Air Force's aging aircraft fleets.

Since receiving its design organisation approval, the Air MDO has continued to work closely with the New Zealand Defence Aviation Authority (NZ DAA) to allow its Exposition and Design Assurance System Manual to reflect best practice. The Air MDO is now able to demonstrate that it is providing a service that meets or exceeds the previous levels of safety, is improving the efficiency of the design process, and is steadily increasing the level of safety assurance for aeronautical design.

The Air MDO delivered the first Approved Change to DARs Type Design in July 2020, with the ADS-B/IFF modification for the C-130. This milestone was closely followed by similar success on the B757 and SH-2G(I) fleets in December 2020, resulting in the delivery of three capability enhancements on three different aircraft types, all under the new DARs framework. These modifications utilised all specialisations across the Air MDO, demonstrating the effectiveness of this new organisation.

The creation of the DARs-approved Air MDO was achieved while the small unit continued to deliver critical design functions to not only sustain existing Royal New Zealand Air Force aircraft fleets, but to also support critical capability upgrades. This included numerous structural repair designs, avionics and software engineering support services, the provision of advice to the Ministry of Defence Integrated Project Teams for P-8, C130J and Naval Dive Hydro Projects, and to Capability Branch for the Cryptographic Refresh, and P3 and B757 SATCOM Projects.

For these reasons, the Air MDO, as a trailblazing DARs-compliant organisation, was nominated for the Royal Aeronautical Society Kestrel Trophy for 2020.

Duncan Campbell 'B' Award - 2022

The Duncan Campbell Award recognises excellence in aviation journalism. There are separate awards for young journalists and writers, and for established journalists and writers who have demonstrated their ability and dedication in this specialised area of journalism. Today, we recognise an established writer's specific ability to interpret complex aviation meteorology into easy to read and understand publications for pilots of all ages and disciplines.

This award is made to **Greg Reeve**. Greg has served as a Meteorological Instructor to aircrew from the Royal New Zealand Air Force and Royal New Zealand Navy since the early 1990s. He has taught a wide range of personnel from ab-initio pilots to experienced pilots and Qualified Flying Instructors, and other aircrew such as navigators, engineers, loadmasters and parachute instructors. Greg served on over fifty Air Force deployments at locations around NZ, which included aerodromes and remote mountain locations.

Greg has made a significant contribution to the New Zealand Civil Aviation Authority (CAA) and NZ aviation sector with regards to safety initiatives. With his knowledge of practical meteorology and his passion for aviation, Greg has undertaken several key projects to assist the CAA in its safety initiatives, with particular emphasis on the challenging General Aviation (GA) sector. These initiatives include:

- A Meteorology manual for PPL Pilots, produced in 2015 in Greg's own time and updated in 2018 with inclusion of new meteorological products for GA. This manual was made available from the Meteorological Service website for pilots to download free of charge. This publication has received widespread appreciation from the GA sector due to its positive impact on aviation safety in NZ.
- Subsequent production of a Meteorology manual for Commercial Pilot Licenced and Air Transport Pilot Licenced Pilots.
- Significant contributions to and participation in the CAA AV-Kiwi writing team.
- Numerous presentations on practical application of meteorology, and how to teach meteorology, geared mainly at flying school instructors.
- Maintenance of the Meteorology sections of the NZ Aeronautical Information Publication.
- On-going assistance with the revision of the MET components of the pilot's licence syllabuses.

Since the late 1990s, Greg provided meteorological and other services at the Walsh Memorial Scout Flying School at Matamata Aerodrome. Greg is now held in high esteem as an elder statesman of the event. In later years this role included mentoring younger aviation forecasters on the finer points of on-site observation, forecasting and briefing. As a result, morning weather briefings have been delivered to a high standard. Despite connectivity issues, the accuracy and timeliness of the meteorological products was produced to the highest standards and recognised as such by pilots and support crew, which included people from Airways, CAA and the airlines.

For unswerving dedication to aviation safety in the field of meteorology throughout his career, his ability to translate a complex topic into respected publications and his lifelong passion to share his knowledge, Greg Reeve is a worthy recipient of the Duncan Campbell Award for 2022.

Presented in Wellington

4th November 2022

Recommended for this award by Wellington Branch RAeS NZ Division and Norm Henry, Chief of Science and Innovation, MetService

Ian J Diamond Award - 2022

The Ian James Diamond award was established as a memorial to Ian James Diamond, General Manager of Engineering at Air New Zealand. The award is made to a young aviation professional wishing to embark on a course of higher academic study leading to a tertiary qualification in an aviation related subject and with the firm intention of participating in New Zealand aviation. The award consists of a monetary grant, a citation and a medal.

This award goes to **CPL Michael Emmerson Y1034102 AV Tech**

CPL Michael Emmerson was posted to the Degree Training Scheme during the period February 2020 to November 2021. During his two years of fulltime study at the Auckland University of Technology (AUT) he set the bar high, achieving seven A+ and four A results. This equated to an overall Grade Point Average of 8.6 out of 9, which is exceptionally high for a Bachelor of Engineering Technology Electronic Engineering. As a result, CPL Emmerson was awarded the "Mott MacDonald Electronic Award" for top Electronic Engineering Student at AUT. For the final year project his group became the runners up for the "Top Technical Data Poster Award". Although COVID-19 had a significant impact on how AUT carried out teaching, this did not affect his outstanding results.

During the semester breaks CPL Emmerson undertook an active role at the Defence Technology Agency (DTA), developing Unmanned Aerial Vehicle capabilities. Here he used his Air Force Avionics core training, together with new engineering skills from his university study, which resulted in outstanding feedback from the DTA Director of Electronic Warfare.

While studying, CPL Emmerson continued to contribute to RNZAF and NZDF rugby before all sports activities were suspended. He has furthered his leadership and coaching abilities by achieving a cross fit coaching certificate in March 2021. CPL Emmerson was also involved in a final year leadership training activity to improve his leadership skills, which he accomplished well, gaining excellent feedback from his peers.

CPL Emmerson returned to the workplace in November 2021. He quickly integrated back into the team and took on new projects within the Computer Bay, where he displayed excellent motivation and self-drive, proving he is a highly competent individual who has the potential to succeed in whatever he chooses to do.

Overall, CPL Emmerson is an outstanding Airman who has led by example and performed at a level above many of his peers. He has a genuine interest in further academic study towards an Engineering Masters in Project Management, and is planning to start this within the next year. This qualification, in conjunction with his personal and professional skills, will stand him in good stead as he assumes greater responsibilities throughout his career. For the reasons stated above, CPL Emmerson is a worthy recipient of the Ian James Diamond Memorial Award.

Presented in Wellington

4th November 2022

Recommended for this award by Chief Engineer RNZAF