

# KiwiFlyer™

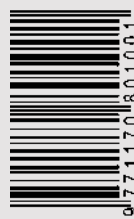
Magazine of the New Zealand Aviation Community

Issue 65 2019 #5



**Avspects Mosquito**  
wins at Oshkosh

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**Annual Guide to Aviation Training**

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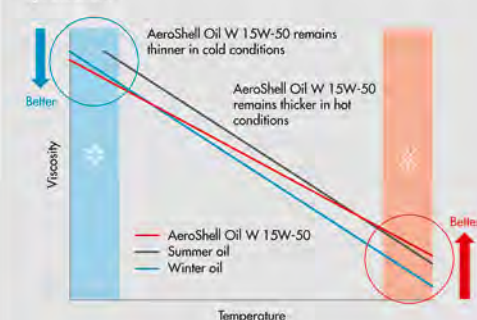
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## From the Editor

If this issue feels heavier than usual it's because there's 80 pages this time, thanks mainly to featuring our annual Guide to Aviation Training in New Zealand. There's also a detailed ten page article on de Havilland Mosquito PZ474, the third such magnificent restoration to appear from the Avspecs hangar at Ardmore. With the aircraft having recently just won Grand Champion WWII Warbird at Oshkosh, Gavin Conroy put a great article together covering the aircraft's very fascinating history and restoration. Of course there's also a bumper set of Gavin's photographs on show too, he having been a frequent visitor throughout the build process.

Also on the subject of WWII, don't miss Frank Parker's report of the NZ Warbirds Association Battle of Britain Flypast day recently at Ardmore. Frank was honoured to have WWII veteran Bryan Cox in the back seat of his Kittyhawk on this occasion, taking the controls and no doubt offering Frank a few pointers too.

Our annual Guide to Aviation Training in this issue includes not only profiles of numerous training providers across the aviation spectrum, but also plenty of wisdom and advice for new and existing flyers. Pathways for getting started whilst still at school are covered – several available at little or no cost. Flight training through to professional licences is a big investment and to help with what is a potentially complicated decision making process, Mark Woodhouse has contributed an article discussing how to choose a flight training provider. The Training Guide isn't just for new pilots however. Existing licence holders may wish to consider upgrading or updating their skills; a new rating perhaps, some mountain currency, or trying out the other side – if you've always flown fixed wing, have a go at rotary, or vice-versa. With the quality and technology behind modern light sport aircraft and autogyros, trying something different isn't necessarily that expensive either. Or give gliding a go and if the thought of not having an engine doesn't appeal, try one that has. In her regular NZ Soaring page, Jill McCaw writes of the numerous self-launching and sustainer power options now available on modern gliders. Whatever form of aviation you're taking, the weather for it only gets better from this point in the calendar, so enjoy and be safe.

Happy reading.

**Michael Norton**

Editor | Publisher  
KiwiFlyer Magazine



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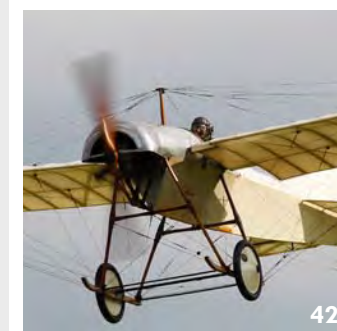
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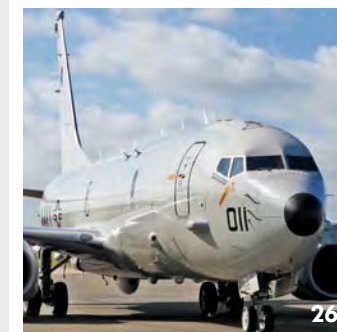
Gavin Conroy photographs de Havilland Mosquito PZ474 during a test flight over the Hauraki Gulf earlier this year.



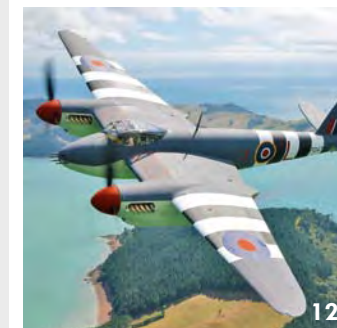
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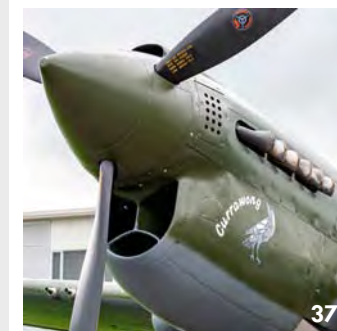
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## About Us

KiwiFlyer is for and about the New Zealand Aviation Community.

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### Cirrus SR Series G6 NZ Tour



Cirrus Aircraft will display the new SR Series G6 with Cirrus' Ross Harrison and Bruce Brownlie at several aero clubs in November. The tour is promoted as "your chance to get some hands on time with the safest, most innovative and certainly the coolest private aircraft in the world today." It's not too difficult to agree with that sentiment. The G6 carries numerous improvements to its predecessors including a redesigned and fully-integrated user interface and a "lightning-quick" new Cirrus Perspective+ flight deck. Cirrus say that "Perspective+ instantly adds game-changing capabilities to G6 – from connectivity to safety to navigation – and gives our owners and operators a completely elevated ground, pre-flight, cabin and in-flight experience."

See it at the North Shore Aero Club (presentation 15 Nov 7-9pm, display 16 Nov 9am-12pm), Auckland Aero Club (display 16 Nov 2-5pm, presentation 7-9pm), Solo Wings Aviation Tauranga (display 17 Nov 9am-12pm) or Kapiti Aero Club (display 17 Nov 2-5pm).

### ADS-B grant announced for GA

Owners of New Zealand-registered general aviation aircraft who install appropriate ADS-B OUT equipment will now be eligible for a grant of up to \$2500 +GST to help with the costs of installation. The grant will apply retrospectively, with compliant ADS-B installations since 14 June 2014 also eligible.

Deputy Director, Air Transport and Airworthiness, Mark Hughes said the grant money will help ensure general aviation aircraft are able to operate in controlled airspace when the when the proposed ADS-B mandate takes effect in December 2021.

"Under the proposed mandate, aircraft without ADS-B equipment won't be able to fly in controlled airspace from that date, so it's vitally important that owners equip early so they can continue flying,"

says Mark. "This grant programme is one of the most generous worldwide, and will help with the costs of installing ADS-B equipment for approximately 4,000 general aviation aircraft on a first-come, first served basis."

To support the uptake of ADS-B IN, up to \$500 +GST will also be made available for those who install suitable equipment to give their aircraft ADS-B IN capability. "Pilots will only unleash the full benefits of ADS-B in the cockpit if they are able to get additional traffic awareness through ADS-B IN alongside their usual visual scanning, so it's important to consider adding ADS-B IN to your installation," says Mark.

The ADS-B Transponder Grant scheme will be administered by the CAA. Eligibility criteria and details about the application process are being developed and will be published on the Authority's website and sent out to aircraft owners when they are finalised.

### Two new H145 helicopters for South Island EMS

In August Airbus delivered two EMS (Emergency Medical Services) configured H145 helicopters to Helicopter Emergency Medical Services (HEMS), a joint venture between Christchurch Otago to service the South Island. These are the first two EMS configured H145 helicopters in the New Zealand market. HEMS chief executive Ken Franklin says the Airbus helicopters set a new benchmark for air ambulance services, offering more room for clinical staff and the latest life-saving equipment.

Airbus Australia Pacific Managing Director Andrew Mathewson says that "A key design factor of the H145 is to be able to configure the helicopter to provide medical and rescue operations for specialised emergency services. This multi-purpose helicopter is tailored for emergency medical services and law enforcement duties, along with aerial work, passenger transport - including private and business aviation - and offshore operations. For multi-mission operators, the H145 can be reconfigured for different roles quickly and easily."

### Warbirds Over Wanaka Rides Day

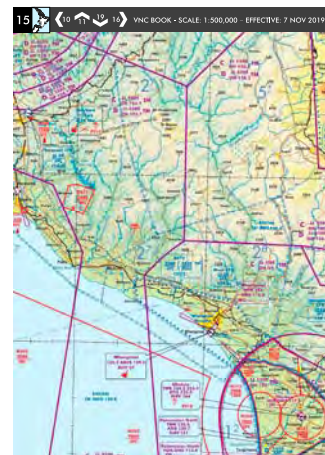
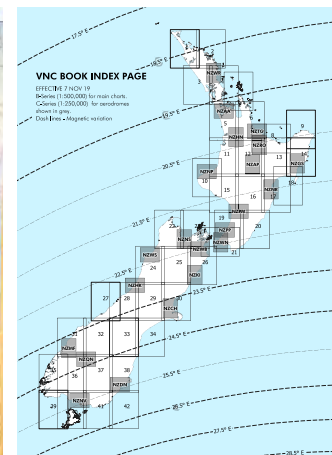
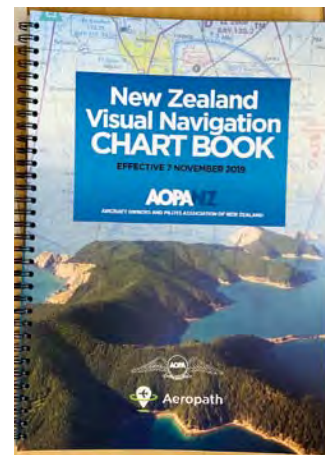
Warbirds Over Wanaka has announced two new additions to their Easter 2020 Rides Day line-up including the chance

to page 8...

## New spiral bound VNC Book Released

When using printed charts for navigation reference in the cockpit, most pilots will have pre-folded them in advance, then unfolding and refolding as required during the flight. But how much easier would this be if the charts were already reduced into spiral bound pages of the 'folded' size to begin with. Not only might ease of use be improved, but also cockpit clutter, not to mention the simplicity of having all the charts together in one easy to reference booklet.

AOPA NZ and Aeropath have combined resources to produce the first Visual Navigation Chart (VNC) Book to be produced from the digital charts produced by Aeropath for CAA. Terms and conditions of the charts printed on the inside front cover state that they are not yet accepted officially, however they are not photocopies; they are taken directly from the digital data that is used to produce the large charts.



The new VNC Chart Book contains 74 pages. There are 22 pages of terminal area charts from the B series charts at a 1:250,000 scale at the front of the book featuring major airports centre of page. These follow the index, chart legend and special messages relating to all the charts.

This is followed by the full coverage of the B series charts at a scale of 1:500,000 starting at the north and working south in series from west to east. Most pages relate to the pages immediately left or right and generally they line up vertically as

well. Adjoining pages in all directions are clearly identified.

North and South Islands are separated and there is a landscape page showing the Cook Strait area from Cape Campbell to NZPP which will make transiting the Strait easy to follow in the cockpit.

The new VNC Books will be sold by both AOPA NZ and Aeropath with the latter providing them as part of the AIP shop stock. AOPA NZ Members can receive a discounted price via the AOPA NZ Website. See advertisement page 27.

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to fly in a Spitfire and the only airworthy Avro Anson Mk 1 in the world. The two-seater Spitfire MH367, owned by Auckland-based Doug Brooker, last displayed at Wanaka in 2012. Sporting a desert camouflage paint scheme this aircraft saw plenty of action in North Africa during WWII.

Warbirds Over Wanaka General Manager, Ed Taylor, expects the chance to fly in the Spitfire will be very popular, especially with Australian visitors as there is no Spitfire flights available in Australia.

Ed is also expecting rides in the beautifully restored Avro Anson to sell out quickly. It doesn't stop there however says Ed: "At the top end you have the Spitfire, P-51 Mustang, P-40 Kittyhawk and the Yak-3 Reno Racer 'Full Noise'. For sheer speed and exhilaration, you can't go past a ride in an Aero L-39 Albatros jet or you can go up in the Anson or a Harvard. If you'd rather something a little more sedate then maybe a ride in the open cockpit Tiger Moth will be more your style."

A full list of the aircraft available, the cost and how to book them is available at [www.warbirdsoverwanaka.com/rides-day/](http://www.warbirdsoverwanaka.com/rides-day/)

### NZAWA turns 60 in 2020

From the NZAWA: "The New Zealand Association of Women in Aviation invite you to our 60th Anniversary Rally. Our rallies involve flying, fun and fellowship and we'd love you to join us.

The rally will take place in Christchurch over Queens Birthday Weekend – 30/31 May/1 June 2020. Flying competitions will take place at West Melton airfield and Springfield gliderfield. We'll be staying at The Double Tree Hilton Chateau on the Park with dinner on Saturday night at the Canterbury Aero Club,

overlooking the main runway at Christchurch Airport. The Sunday night formal dinner and prize giving will be at the hotel.

Do watch our website [nzawa.org.nz](http://nzawa.org.nz) for registration details as they become available."

### OzRunways on NZ Tour

The OzRunways team are touring New Zealand offering free in-house app tutorials to interested Aero Clubs. This is a great way to bring fellow flyers and members together, learn some new tricks, and have EFB questions answered. If you would be interested in having OzRunways visit your Aero club, contact the team at [support@ozrunways.com](mailto:support@ozrunways.com)

### Aviation NZ Conference and Awards

The 2019 Aviation NZ Conference held this year in Auckland during August was very well supported with more than 250 attendees at conference and at the awards dinner. In addition, the trades hall was bursting full with 35 trade stands occupied (up from 25 in 2018). There were numerous excellent speakers and discussion sessions spread across the two primary days of the conference.

This year's NZAAA awards went to Alex Mudford, Murray McGregor and Hamish Rogerson for Pursuit of Operational Excellence; and a special award to Field Air Australia, recognising 25 years consecutive trade exhibitor presence.

On the Aviation NZ awards night, Garry Blithe received the AEANZ award; Mike Hall from Airwork received the Aviation NZ Individual Award; Flightcell International received the Aviation NZ Company Award; and Helicopters Otago and Flight GSE were recipients of the Richard Pearse Innovation Award. Congratulations are due to all, as well as the organisers for another very successful annual gathering.

### New transit Lounge for Feilding Aerodrome

A new modern transit lounge at Feilding Aerodrome now provides for all transiting and visiting pilots and their passengers. Complimentary hot and cold refreshments are available. The lounge is located alongside the Z and BP avgas installations. Bruce Brownlie, speaking on behalf of Feilding Aerodrome Inc., says that in addition to there being no landing charges for itinerant visiting pilots, the lounge is a welcome enhancement to the aerodrome where visitors are always welcome.

"While it is accepted that the surrounding airspace to Feilding can be intimidating," says Bruce, "if using controlled airspace, you will always find the controllers at Ohakea and Palmerston North super friendly and accommodating. And having said that, access can be obtained quite easily from all directions without entering controlled airspace at all."

### Corsairs and Kittyhawks website

Renowned Kiwi aviator and WWII veteran Bryan Cox modestly suggests readers may be interested in the website [www.corsairsandkittyhawks.com](http://www.corsairsandkittyhawks.com). Says Bryan, "About four years ago, a near neighbour who happened to have a software business in Tauranga, offered to convert my three books into eBooks. However, with 600 photos in Pacific Scrapbook, and other reasons, that project is still in the development stage. He did though, produce a very creditable website in connection with the project, titled [corsairsandkittyhawks.com](http://corsairsandkittyhawks.com) which to date I haven't generally publicised, but a number of aviation enthusiasts both in NZ and

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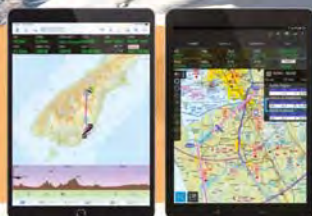


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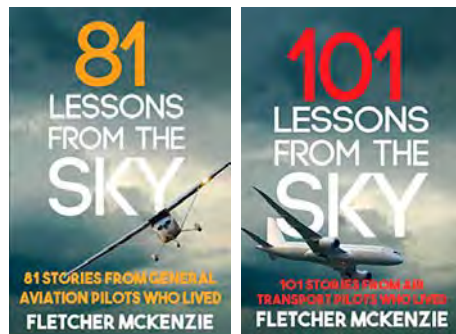
overseas have somehow stumbled across it and have contacted me. I enjoy receiving and always acknowledge their feedback.”

KiwiFlyer very much recommends the website as a fascinating insight into some of Bryan’s history, WWII operations, aviation wisdom, and various snippets of New Zealand aviation history as well. Now in his 94th year, Bryan recently participated in the NZ Warbirds Battle of Britain Flypast – from the back seat of a Kittyhawk in which, once formalities were done with, he took control and reminisced with some wingovers and aileron rolls – turn to page 37 for more.

### More Lessons from the Sky

Readers who follow our recommendations might have purchased Fletcher McKenzie’s book ‘81 Lessons from the Sky’ when it was published last year. To recap, the book contains 81 stories from General Aviation pilots who had an aviation ‘event’ of some sort, survived to tell the tale, and then duly did so – in most cases via either Australian, United Kingdom, or United States aviation safety reporting systems.

There are now two more books in the series. The first focuses on Air Transport pilots and is entitled ‘101 Lessons from the Sky’. The second is entitled ‘71 Lessons from the Sky’ and focuses on Helicopter pilots, both private and commercial and including



material from Claude Vuichard who invented the Vortex Ring State recovery technique.

There’s more to come too. Fletcher’s goal is to share 1,000 lessons from the sky, with additional books featuring 72 lessons on the Cessna 172, and books focussing on aerobatics and taildragger lessons and gliding.

Fletcher’s books all follow a similar theme. They are a collation of pilot wisdom told succinctly in the pilot’s own words, copied from safety reports. CASA (Australia), NASA (USA), and CHIRP (UK) were all happy for stories from their databases to be republished. What about NZCAA you wonder? Sadly Fletcher’s request there was declined.

It’s true that the stories Fletcher has assembled have all been told before, but they are not so easy to seek out to read as they are in the convenient and well-presented formats Fletcher has created. His books can be picked up at leisure and contain much to absorb. Some of the stories are funny, some are disheartening, and some are quite alarming. Many include addition postscript comments and advice from the reporting authority.

Many pilots might declare “that wouldn’t happen to me” but at least on some occasions that will only be the case because perhaps you read about it in Fletcher’s book first and then made the right decision some day when it could very nearly have happened otherwise. Many of the anecdotes within these books will be powerful back-of-mind lessons to remember.

And if readers have a lesson they are willing to share to ensure others learn from it, please do share it with Fletcher to help make the skies safer for everyone. Contact Fletcher on [fletch@avgas.org](mailto:fletch@avgas.org).

Fletcher’s books are published by Squabbling Sparrows Press and can be purchased as ebooks or paperback via Amazon.

## Primary Avionics acquires Avionics Hawke’s Bay

Two well-known and respected, privately owned avionics maintenance providers have joined forces following Hamilton-based Primary Avionics Limited’s acquisition of Avionics Hawke’s Bay Ltd. The combined business will be based in Napier from 1st October.

Adam (Sammy) Seumanutafa from Primary Avionics says that moving his family to the edge of the island wasn’t something he had planned on doing 12 months ago. However, after hearing there was a potential opportunity to acquire the Avionics Hawke’s Bay facility in Napier, this has now become a reality.

“Primary Avionics has been based in Hamilton for four years and a sea change to the coast seemed like a good idea,” says Sammy. “We’ll have better facilities there as well as the amalgamated expertise of both Steve Lillie (AHB) and myself. We both have backgrounds in the Air Force and general aviation.”

Sammy is delighted to have Steve remain as an integral part of the technical team with his expertise of local aircraft, operators and avionic solutions of course remaining invaluable to the broader company and their clients. Also joining the team is Mareta Seumanutafa in an administration and technical support role – helping to ensure that Sammy and Steve are as available as possible for fault repairs, advice, installations and maintenance.

Over time, the Avionics Hawke’s Bay brand will be absorbed into Primary Avionics. Sammy says that with a fantastic facility developed by Steve, and two avionics LAMEs on site, the company now has the capacity to provide a complete fly-in avionics service at Hawkes Bay Airport and Bridge Pa Aerodrome. With the additional ability to service client’s aircraft in their own hangars, Sammy is confident that the level of avionics support offered to aircraft operators, both commercial and private, will be as comprehensive as at any other facility in New Zealand.

The fast approaching ADS-b mandate will be occupying space in many operator minds with questions about requirements, available systems, integration with existing equipment and cost. Primary Avionics can help with all of these questions. Sammy welcomes all enquiries and is happy to talk through possible options to ensure operators are making the best decisions regarding equipment and installation and of course the newly announced rebate. Contact Sammy on 022 636 6573 or [contact@primaryavionics.co.nz](mailto:contact@primaryavionics.co.nz)



Sammy Seumanutafa and Steve Lillie

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# The story of Mosquito PZ474

No caption required. Just take a moment to admire this beautiful machine.

Earlier in the year Avspecs rolled out another miracle achievement in the form of Mosquito PZ474. Following a short test flying phase it was shipped to Texas for new owner Rod Lewis. Once test flying and FAA certification was completed in Texas the aircraft winged its way to Oshkosh to be prepared for judging for the prized title of Best WWII Restoration at the Oshkosh show. It was met there by many of its New Zealand restoration team. As it turned out, the Mossie cleaned up – winning Grand Champion WWII Warbird. Avspecs were presented with the Golden Wrench and Phoenix awards for their part in restoring the machine. With the aircraft heading to Oshkosh and with success there seemingly a safe prediction, it seemed appropriate to hold off celebrating this latest Avspecs achievement until the awards were announced. Gavin Conroy tells the story of PZ474.

**On** January 13, 2019 a crowd gathered at Ardmore to see DH FB.VI Mosquito PZ474 take to the air in the hands of Steve Hinton and Warren Denholm.

There was quite a bit of additional excitement about this particular aircraft because PZ474 had served with the RNZAF before being put on the civilian register as ZK-BCV.

PZ474 was built in Hartfield in early 1945 and was allocated to RAF No. 19 MU (Maintenance Unit) on the 19 April 1945. It was passed on to No. 80 OTU (Operational Training Unit), then to No. 132 MTU (Mosquito Training Unit) at East Fortune and finally ended its RAF days at No. 151 MU during 1946.

The RNZAF had shown considerable interest in the capabilities of the Mosquito and although WWII had ended, in 1948 they placed an order for 90 of the type to be delivered to

New Zealand. These were not new aircraft but overhauled RAF machines. PZ474 was one of the last of 90 to leave England in 1948. It took some 18 months to get them all to New Zealand, only for time to have marched on. By then the type was showing its age as jet aircraft began to dominate air arms around the world. Many of the Mosquitos were flown to an outdoor storage facility at Taieri, facing a bleak future.

## Arriving and departing New Zealand

PZ474 initially arrived at Base Ohakea

on April 5, 1948, in the hands of an RAF/RNZAF flight crew. On arrival in New Zealand it was allocated to 75 SQN RNZAF as NZ2384 and is believed not to have flown actively. Not long after arrival it was flown to open air storage in Taieri to await the axe, quite literally! It was at risk of being broken down for scrap like most of its type.

In 1952, two Americans, Richard Loomis and Lewis Leach arrived on the scene with the objective of buying four Mosquitoes and flying them to the USA for potential contract work. The aircraft

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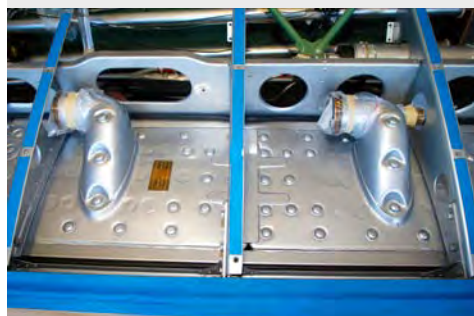
The early stages of connecting wing and fuselage to ensure a good fit when they are eventually joined together.



Fitting the instrument panel. The wood smells great.



Two large fuel tanks are fitted in the bomb bay.



Radiators mounted in the leading edge of the wing.



Cockpit fit-out almost completed now.



The hydraulics are a myriad of amazement.



Crew door to the cockpit. Amazing attention to detail.

were purchased from the New Zealand Aircraft Stores Board in 1953 by Aircraft Supplies NZ, based in Palmerston North, and owned by Harry Rolfe. This company was given the task of bringing the aircraft back to airworthy standard for export. They built a hangar at Milson that could fit one entire Mosquito in it and there they intended to do the wood repairs for each Mosquito prior to their flights to the USA. Each aircraft was flown from Taieri to Palmerston North by Bob Scott. It was found that out of the six aircraft purchased by Rolfe, four of the aircraft could be brought back to airworthy status with quite a bit of work. Fortunately, NZ2384 was one of them and escaped the axe again. It was a huge job for a small team to bring these aircraft back to flying condition. Harry's son Bill Rolfe was in the RNZAF, serving as an engineer at the time, and had some knowledge of the Mosquito. As time was tight to get the first aircraft off to the USA, Bill spoke to his CO and was given two weeks of special leave to help get the first aircraft ready. NZ2384 was allocated the registration ZK-BCV on September 2, 1953 as work was underway to get all four up to airworthy standard and fly them out of the country.

#### A change of register

As it was on the New Zealand civil register the Mosquito had to comply with the local Civil Aviation rules and when inspector Fred O'Leary looked over ZK-BCV he came up with a long list of work to be done before the aircraft would be given a certificate of airworthiness. This did not impress the captain for the flight, Elgen Long. He was so outraged by the list of things to be done that he asked to borrow a car. He drove to the American Embassy and placed the aircraft on the USA civil register. ZK-BCV was now N9909F. That took care of the list of jobs to do to satisfy the New Zealand CAA as it was no longer operated under their jurisdiction. When Fred turned up the next day to check on progress, he was told in no uncertain terms that the aircraft was now on the American register and that Fred was to stay away from it from that day on! Part of the work done was to have a 400-gallon fuel tank installed. This, to be carried in the bomb bay, was made by an engineer in Feilding. Access to the filler cap was through the top of the canopy, which was awkward to say the least, but the extra range was appreciated. Long

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Russell Jenkins applying PZ474 to the fuselage.



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range wing tanks were also installed.

Bill Rolfe was able to fly with Lewis Leach on a test flight to measure fuel burn rates for the trip to the USA. He was the last Kiwi to fly in this Mosquito until Warren Denholm during the test flights in January 2019. In fact, Bill was most likely the last New Zealander to fly in a Mosquito until KA114 flew again in 2012.

In 1955 Mosquito N9909F, Captain Elgen Long and Lewis Leach departed New Zealand via Auckland, then to Fiji, and on to Hawaii, using only dead reckoning navigation. Despite a reported in-flight fire that was put out by the crew the aircraft made it to the USA, but the other three aircraft never got a chance to leave New Zealand. The plan was for Long and Leach to return to New Zealand and fly them out, one at a time, but once news broke that a former RNZAF military aircraft had been flown out of New Zealand to another country and more were to follow, the government put a ban on exporting former military types, in case they were to be used for foreign military use. Although they were being flown to a country which was an ally, there was no information to suggest they would not be then flown on to another country and used in combat. As a result, the remaining three aircraft were scrapped.

### American operations

Once in the USA, the aircraft was to be flown by Trans World and be used for an upcoming contract that included geographic surveying of northern California and Nevada. In March 1955 it was fitted out with the camera gear required to undertake this work, but its sister ship, owned by Trans World (N9919F)

reportedly did the flying. This aircraft was a B.35 from the RAF which ended up being crashed (leading to the death of the pilot and loss of N9919F) for an insurance claim. (See March 2008 edition of *Aeroplane* for more information.)

Trans World was in trouble financially and in order to keep its sister ship flying, N9909F was sold to the Insurance Finance Corp (IFC) in 1956 and then leased back to Trans World; but again, not much is known of its flying activity. Unknown to IFC, N9909F had been attached to Whiteman Airpark for a substantial sum of money for rent and other bills. Once these were paid by IFC the Mosquito was repossessed from Trans World. Ownership changed once again. In 1958 it was purchased by California Air Charters, but just over a year later it was back at Whiteman Field under the ownership of Marvin E Whiteman and slowly rotting away. It is possible that at this time the aircraft was part of operations undertaken by the CIA.

It is thought that the CIA used the aircraft for gathering intelligence in North America but, again, no real proof has come to light. Perhaps the reason Elgen Long was able to get the aircraft moved onto the American register overnight was due to a connection with the CIA and that the so-called photography work it was supposed to be used for could have been the original intention for the aircraft, but later changed. Remember that it was thought that the aircraft never actually did the photographic/survey work, its sister ship did. There is little doubt it was doing some flying in the USA, so what was it doing? It has even been suggested it was used to shoot down drug smuggling aircraft. Again, at this time, there is no definite proof but with its speed, cruise altitude, and potential firepower it could have done the job.

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Engine runs in front of a big crowd at one of the Ardmore Open Days.



Looking like a period photo, but this is PZ474 in 2019.

This does seem unlikely as no images from the time show the aircraft with any weaponry. During the 1950s a few people in New Zealand suggested it was to be used by the CIA even before it left New Zealand, so who knows? It sure does leave one thinking!

N9909F had its registration cancelled in 1970 and once again became PZ474.

Well known Warbird collector Ed Maloney looked to put a deal together for PZ474. The aircraft was cut in half behind the wing for transportation, but the sale was never finalised. PZ474 was then sold to James R Merizan. He had the idea of bringing it back to static display status, but this never happened. By this time the remains of the aircraft were in storage at Chino and in 2012 photos surfaced that appeared to show PZ474 in very bad condition.

### Back to New Zealand

The real possibility of saving PZ474 came along in 2014 when the project was purchased by Rod Lewis of Lewis Air Legends. Rod has had several aircraft restored by Avspecs, including his Mk V Spitfire, P-40C Tomahawk and DH Rapide over the years, and had a real interest in a Mosquito due to previously watching Avspecs bring KA114 back to life.

The aircraft was packed up and somewhat ironically, sent back to New Zealand for restoration. The aircraft had a lot of parts missing and, out of the three Mosquito aircraft fitted out by Avspecs, PZ474 became the most challenging to rebuild.

It was amazing to be at Avspecs in October 2016 for the last test flight of Mosquito TV959 and to see the wing arrive for PZ474. It was soon attached to the fuselage constructed by Glyn Powell's company, Mosquito Aircraft Restorations Ltd, not far from Ardmore. They had also produced the fuselage for TV959. A production line had almost formed in the Avspecs hangar. Work on components and engines had been started well before the wing and fuselage arrived, so the team were in a great position to advance the Mosquito quickly, and quickly they did. Just over two years later, PZ474 was flying again.

Two rather important pieces of history came with the aircraft from Chino, both of its original engines. These engines had been installed on the Mosquito from new,



Cutting a beautiful shape in the sky, the Mossie is flown over the Hauraki Gulf by Warbird legend Steve Hinton.

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Chris Verrall and Warren Denholm filling tanks before the first flight.



The Avspecs crew. Also kneeling front left is owner Rod Lewis and front right is Steve Hinton.


and following overhaul by Vintage V12s, they are back powering this wonderful aircraft.

Towards the end of 2018 the aircraft was rolled outside wearing its RAF 235 SQN colour scheme, which had been a well-kept secret. The Avspecs team researched this well and repainted it as an aircraft that would have flown on D Day. It really does look the part in its overall grey and wearing invasion stripes.

Then in early 2019, PZ474 flew again after more than 75,000 hours of work restoring it. Following five flights totalling 2.15 hours it landed for the last time in New Zealand on January 16, 2019 and was then put on a ship heading to the USA.

Steve Hinton did the test flying and had nothing but praise for the team who put this aircraft together. On the last flight in New Zealand the aircraft was photographed air to air and on board with Steve was owner Rod Lewis. He came out to see the testing and first flight of his new aircraft. When they landed, he told me he loved flying in the Mosquito. The workmanship was amazing and he could not wait to get it home and fly it himself!

For the restoration team it was bitter sweet to farewell the aircraft after all their work, but the cake was well and truly iced when they saw it win Best WWII Restoration at Oshkosh. Hearty congratulations are due to all who were involved.

Gavin Conroy 

Rod Lewis looking over Steve Hinton's shoulder during the last flight in NZ.



Warren Denholm and Steve Hinton share a moment at the end of flight testing. Steve &amp; Warren did all the testing until the last flight when Rod went with Steve.



Off she goes on another test flight. Another flawless restoration to come out of Avspecs.

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 Contact Alan: xpxrd@gmail.com

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November 28th - 30th  
**South Island Akro Fest**  
 Aerobatic competition and fly-in at Omaka. Run by the NZ Aerobatic Club and hosted by the Marlborough Aero Club. More info and to register contact Andrew: torque\_roll@hotmail.com

January 1st  
**First in the World Fly-in 2020**  
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Often have I heard the comment "I don't need hull cover yet as it will be covered by my engineer's insurance when it's in his hangar".

The facts are that this may not be the case. Hangarkeepers Insurance only covers the negligence and legal liability of the hangar owner with regard to aircraft held in their care and custody. If your engineering organisation denies they are responsible or the circumstances of the loss won't stand up in court, then you can't expect any compensation from their insurers. It is very important then, that you maintain your own insurance even for a construction project or lengthy refurbishment programme.

Having clarified that, let's consider a couple of scenarios that might occur totally beyond your control i.e., the hangar burns down, the aircraft (or parts) are stolen or

during an engine run the apprentice taxis into something requiring a replacement prop and bulk strip (even worse if your engine is running on condition and you have to overhaul the engine).

If you have your own hull insurance, you may be reluctant to claim under your own policy as there is the policy deductible to consider, loss of No Claims Bonus, a possible premium increase next renewal and a claim that you could be accountable for, for years to come. If the shop readily admits liability and their insurers step up to the mark then it could be convenient to let them get on and rectify the damage.

However, even if there is no dispute with the shop or their insurers denying liability it's always best to lodge a claim under your own policy and let your own insurers appoint a Loss Adjuster to sort out the mess. They will do the negotiations, pay any legal fees that arise and isolate you from the nitty gritty negotiations. By assigning the claim to your insurance company you will have an adjuster that will be on your side and like you will want your aircraft repaired quickly and properly. In addition, your insurance company will have every expectation of recovering all the costs from the negligent party.

Even though the loss will be a claim under your policy, a loss due to someone else's negligence will not generally be considered adversely in future renewal evaluations. Your insurance adjuster will take charge and if necessary redirect repairs to an alternative repairer (only with your approval) who may be able to get the job done quicker. Your insurers will in turn pursue the negligent party and their insurers for full reimbursement and also assist in the recovery of the deductible and any other relevant expenses. Your insurance company assumes your Rights of Recovery when they pay the repair costs – this is called Subrogation.

Things naturally take an entirely different course if you or your repair shop are not insured. My best advice therefore is to firstly ascertain your maintenance provider has the necessary Hangarkeepers/Products Liability Cover and their level of coverage is enough to cover the full value of your aircraft. Low cost maintenance is a bad option when it comes at the cost of no insurance back-up.

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# An interview with Pam Collings

Back in April, the Omake Air Show paid a great tribute to aerobatic pioneer Pam Collings. Andrew Love flew the display routine that Pam flew throughout New Zealand after competing at the World Aerobatic Championships in Russia in 1976, the first New Zealander to compete in aerobatics at world level. Jill McCaw spoke to Pam about her fascinating life in aviation.

*I understand you've been involved in aviation for fifty plus years now. What got you started and how did you get into aerobatics?*

I'd just finished my first year at university when I won a flying scholarship with the Canterbury Aero Club that was through to PPL which I got in October 1965. I enjoyed competing in various club and New Zealand Airwomen's Association (NZAWA – now the NZ Association of Women in Aviation) competitions for landings and such-like and then aerobatics, the challenge of which I especially enjoyed.

*You were so interested that you bought your own Pitts Special. Tell us about that?*

I first saw a Pitts Special at the World Aerobatic Championships in France in 1972 while on my Big OE. It was doing aerobatic manoeuvres I wouldn't have thought possible. That kindled my desire to one day compete at a World Championship.

Later that year, on my way home I took a ten-hour advanced aerobatic course in a 2-seater Pitts in Florida. Now I knew I had to own a Pitts.

The United States were to host the World Aerobatic Championships in 1976 and this became my target. In March 1975 I was in the States and with financial assistance from my parents took delivery of my Pitts Special, registration N76NZ. I competed in as many competitions throughout the States as I could that year and it wasn't all plain sailing but in the course of that year I flew through 26 different states.

*But the 1976 Worlds you flew was in Russia?*

Yes, they changed the venue! It gave me a huge expensive logistical problem. I had to ship my aircraft home to New Zealand, practise here and then somehow get it to Russia for the championships in July. Thankfully I had a large supportive group of family, friends and well-wishers. The aviation community was fantastic. My new husband, Ces and I set off.

We spent a couple of weeks training with the Australian team in Austria near the Hungarian border. Then we were supposed to join up with the Hungarians who would lead us through to Russia for the contest. There was a lot of red tape involved with clearances into the Hungarian airspace and then with limited radio frequencies in my plane, I needed to stay in company with the Australian Pitts, but due to weather, I lost sight of him and was forced to turn around and try again later. Although I made



Pam Collings at the 1976 World Aerobatic Championships in Kiev.



Pam and Julie Bubb in the commentary box at this year's Omake Air Show.

it in time to compete, I missed the opening ceremony. It was my first competition at Unlimited level and my performance wasn't in the top echelons. I finished 12th in the women's section and 47th overall out of 68 pilots.

The astronomical cost of the whole exercise made competing internationally impossible although I did compete once more, at late notice, in the US in 1980. I may not have won a medal, but I have a beautiful trophy for Sportsmanship presented to me by the US team. This trophy is now the Pam Collings Cup for aerobatics at the Flying New Zealand National competitions.

*You've been credited with bringing the discipline of Precision Flying to New Zealand. How did that come about?*

Through my membership of the Ninety-Nines (International Women Pilots) I heard about Precision Flying. It is a more affordable type of competition for NZ pilots to compete internationally as it involves navigation and landing skills and can, and usually is, flown in ordinary training aeroplanes. In 1985 I was the New Zealand team coach at the World Precision Flying Championships in Florida, and I was also a member of the team to Denmark in 1989 in the position of International Judge. I have remained supportive but not actively involved. New Zealand hosted the 1999 World Championships in Hamilton.

*All this flying was your hobby. What was your day job? How did you support all this?*

I started out with a BSc and a Library Diploma and worked in the University of Canterbury library for some years – but the flying gradually took over. In 1981 I joined the full-time instructing staff at the Canterbury Aero Club (and continued part-time until about 14 years ago). I joined the Civil Aviation Division of the Ministry of Transport as it was then, as an investigating officer (flight operations) in 1984. In 1989 I moved into a safety education role, producing flight safety publications, videos and running training courses. I continued in that role for 17 years and retired in 2006.

*You have an impressive list of awards.*

I am fortunate to have been honoured in various ways. In an employment role in 1986 I was presented a Personal Commendation by the Director of Civil Aviation for my "inestimable contribution to flight safety" and there have been other awards over the years. There was the RNZAC Notable Achievement in Aviation in New Zealand in 1981. And in 1992 the Australian Women's Pilots Association gave me the Nancy Bird Trophy for the most noteworthy contribution to aviation by a woman of Australasia. In 1993 I was awarded the FAI Paul Tissandier Diploma for Services to Aeronautics and Airports.

*And?*

And in the New Year's honours 2001 I was made a Member of the New Zealand Order of Merit for services to aviation. I couldn't have achieved what I have without the support from family, friends, good committees etc. I believe the award represents a much wider acknowledgement of services to aviation than just one person.

In 2005 the Ninety-Nines gave me an Award of Inspiration. That was the year we hosted their international conference here in Christchurch. In 2016 The International Forest of Friendship, in Archison, Kansas (Amelia Earhart's birthplace) added me to Memory Lane, for exceptional contributions to aviation.

*You really are inspirational, and aviation has been your life to such an extent that you and Ces created an airfield just so that you could park your plane beside your house. Is that true?*

Yes, we were able to achieve every pilot's dream. It took us some years to find the right piece of land. "Forest Field" is on the northern side of the Waimakariri River, 10 nm northwest of Christchurch Airport. It's 'L' shaped which has let us put in three

runways to cover Canterbury's winds and of sufficient length for the average club aircraft and pilot to operate safely. We moved nearly every fence on the property and put them somewhere else and later on subdivided into 10 acre blocks. There are now ten properties with access to the airfield. Owning the airfield kept us involved in aviation. After Ces had given up flying he was kept busy mowing runways until his death in 2015. I do some mowing myself now and find it very therapeutic.

*I hear you're judging aerobatics again.*

Andrew Love asked me along to support the first Akro Fest, the South Island aerobatics competition and invited me to judge. I've done that a few times now. Then I was planning a North Island trip in my campervan earlier this year and tied it in with the New Zealand Aerobatic Club Nationals at Masterton (as I hadn't been for some years), and I ended up judging at that too. It's good for me to support the younger ones. I'm aware of age though. With judging it is getting harder to see that small plane in the far corner of the box!

*But you've not retired from flying?*

Not yet. I am conscious of the limitations of an older pilot (a diminishing comfort zone!) and try to keep current – at least it is easy for me to get out and do a few circuits.

And I pick my days now. My favourite flights are to head west in the winter to view the snow-capped mountains, braided rivers, native bush and lovely blue lakes and be back home for lunch.

*That sounds lovely. Thank you for talking with us Pam.*

Jill McCaw



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# USN Boeing P-8A Poseidon visits NZ

## A look inside the RNZAF Orion replacement

In mid-August a US Navy Boeing P-8A Poseidon visited RNZAF Base Ohakea. The Poseidon had come to exercise with Number 5 Squadron and to show the aircraft to the wider RNZAF and local media. The P-8A Poseidon will replace New Zealand's Lockheed P-3K2 Orion from 2023. Gavin Conroy went along to see the aircraft and give readers an insight into what our Air Force will be operating for decades into the future.

made this inspection possible. The insight into what the RNZAF is getting was quite amazing.

The Poseidon is only in some ways a replacement for the P-3K2 Orion. The RNZAF has used the Orion for decades for many different roles, but this machine is more suited to submarine hunting and the RNZAF can use its advanced technology to work more closely with allied nations - flying the P-8 during exercises and keeping a general eye over seaborne activity as required.

The government has said they are looking at options to take over fisheries patrols and search and rescue, so the RNZAF will not need to tie up an asset like the Poseidon for these duties and the P-8 can be used in the specialist role it is designed for. It won't be a jack-of-all-trades like the Orion. For example, with the P-8 you cannot open a door at the rear

to throw out a life raft or other supplies. Something could be developed over time, allowing drops from the bomb bay should 5 Squadron find themselves needing to supply such support. A report is due at year's end to address this. It may be that smaller aircraft, satellite technology, drones, or a combination of all three could be used to support the P-8A.

The Poseidon was developed as a replacement for the P-3 Orion and most of the American crews operating the Poseidon these days came from operating the P-3s in the ASW (Anti-Submarine Warfare) role.

Commanding Officer Carl White from VP-5, based at Kadena in Japan, flew the Orion previously and here are his thoughts when he made the transition to the Poseidon: "Right from the beginning the P-8 impressed me due to the modern feel and technology in the aircraft. The



US pilots: "It's a dream to fly compared to an Orion."



Main consoles to the right. Pax seating to the left.



Rotary sonobouy launchers and storage racks.



Sonobouy exit chutes.



A wing hard point for weapons and pods.

P-8 is essentially a Boeing 737-800 fuselage with the more modern Boeing 737-900 wing. People look at and say, 'Oh look, it's a 737,' but it is anything but a 737 from an operational view. For crews operating the P-8, the aircraft is better pressurised, is quiet and a big part of its design was to reduce crew fatigue which can be high in the P-3 due to its age. The P-8 is much more efficient in everything it does. Sure, it won't fly a 15-hour mission like an Orion, but, on the other hand, to do that, you would have to shut down one, or possibly two engines, to get that range at a degraded performance. In the P-8 we can fly 10+ hours at a much higher cruise speed, at a higher altitude, so we can be more productive. We can refuel it air-to-air as well if we need to stay on station for extended periods. We have also operated the aircraft down to 200 feet AGL with no issues at all. Where it does compare to a 737 is in the cockpit. Apart from a few military items it is very much a 737 up front. Compared to the Orion we only need a crew of two. The cockpit is not big enough for a flight engineer, observer etc, so the workload is higher, but the systems are easier to use."

The RNZAF's Lockheed P-3K Orions

were purchased brand new. These went into service in 1966 and were joined by a sixth aircraft purchased second hand from the Royal Australian Air Force in 1985. From there the aircraft had upgraded avionics and radar systems fitted in the late 1980s. Following that, the wings were replaced as part of a life extension programme in 2000, and a new avionics suite was fitted in 2012. This led to the aircraft which started life as P-3B ending up as P-3K2.

Carl had the opportunity to look over a P-3K2 and I asked him what he thought of our upgraded aircraft and what challenges await the crews in future. "Having looked at the P-3K2 it is easy to see how capable that aircraft is. The sensor equipment is very good, and I think the systems operators down the back will adapt quickly to the new aircraft. It will be different for the crew up front, they will need a lot of training. The P-8 is operated differently to the P-3K2 but they will adapt quickly enough."

At least six RNZAF personnel, including two pilots, will be heading to Jacksonville for training by the US Navy on the P-8. They will be based with VP-20 who also assist other nations training

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on the aircraft. Our personnel will return home to train future crews as the new aircraft arrive. During the US Navy's Poseidon visit to New Zealand, the two pilots chosen to go to Jacksonville will fly in the aircraft, giving them a small taste of what to expect before they head over for their formal training.

A lot of new support infrastructure is required to support the aircraft. Two new large hangars will be built alongside the new 3 Squadron Hangars at Ohakea with two aircraft per hangar.

5 Squadron is currently based at Whenuapai, near Auckland, but the P-8 fully loaded (max take-off weight 85280kg), needs to operate from a longer runway. Ohakea offers this option, meaning 200 plus personnel will be moved to Ohakea in the lead up to the P-8 beginning operations in New Zealand.

Walking around the aircraft, I was impressed by the large powerful CFM56-7 BE(27) engines, each with 27000 lb of thrust. It has sensors everywhere and two pylons on each wing for weapons. It can be equipped with four missiles quite easily. Two weapons routinely used by

overseas operators are the Lightweight Anti-Submarine Torpedo and AGM-84 Harpoon Anti-Ship Missile. The bomb bay is behind the wing, unlike the Orion, and it has a large ECM (Electronic Counter Measures) pod under the fuselage, self-protection equipment such as flare dispensers, and a large multi-mode radar fitted in the nose.

It is when you get onboard that the real differences are obvious.

As mentioned, the cockpit is a lot smaller than the Orion's. Technology means most modern cockpits are smaller than previously. Behind the cockpit are a crew rest station, observer area, five workstations and six extra seats on one side. There is a table surrounded by four chairs to either mission plan or play cards.

There is some amazing kit further back! In the P-3K2 the sonobuoys used to track submarines are loaded by hand and dropped manually, but not so with the P-8. In the P-8 there are three rotary launchers with three exit ports on each side under the fuselage of the aircraft. These can be fired automatically with more than 60 being able to be launched rapidly if required.

The Poseidon is a very capable machine, but (personally) I think we could use five aircraft instead of four. To replace six Orions with four Poseidons makes sense if the aircraft are only required to fill the role they are designed for. To ensure that good search and rescue options are in place, an area where the Orion excelled and where, no doubt, the P-8 will be used for from time to time, the government will need to invest in a good future plan. With only four aircraft the squadron could be pushed at times.

It will be sad to see the Orion go from service and although it is still a capable machine, the operating and maintenance cost have spiralled out of control in the 52-year-old aircraft. A replacement is required and congratulations to the government and the RNZAF for choosing such a capable aircraft to serve for decades to come.

This visit was only the second by a US Navy Poseidon to New Zealand. Carl and his crew loved showing the new aircraft to the RNZAF and it is fair to say there are some pretty excited 5 Squadron crew members who cannot wait for the time to pass until they can operate this state-of-the-art platform.

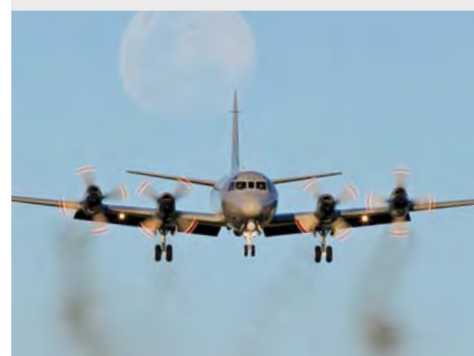
Gavin Conroy 



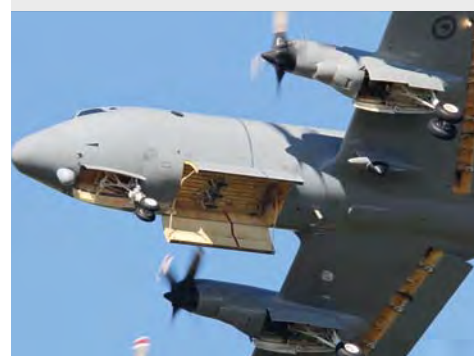
The RNZAF P-3K2 Orion cockpit.



Less space in the P-8 but no Flight Engineer required.



An RNZAF Orion on approach. They'll be missed.



Orion bomb bay. It's behind the wing on the P-8.



The P-8 being readied for a mission out of Ohakea.

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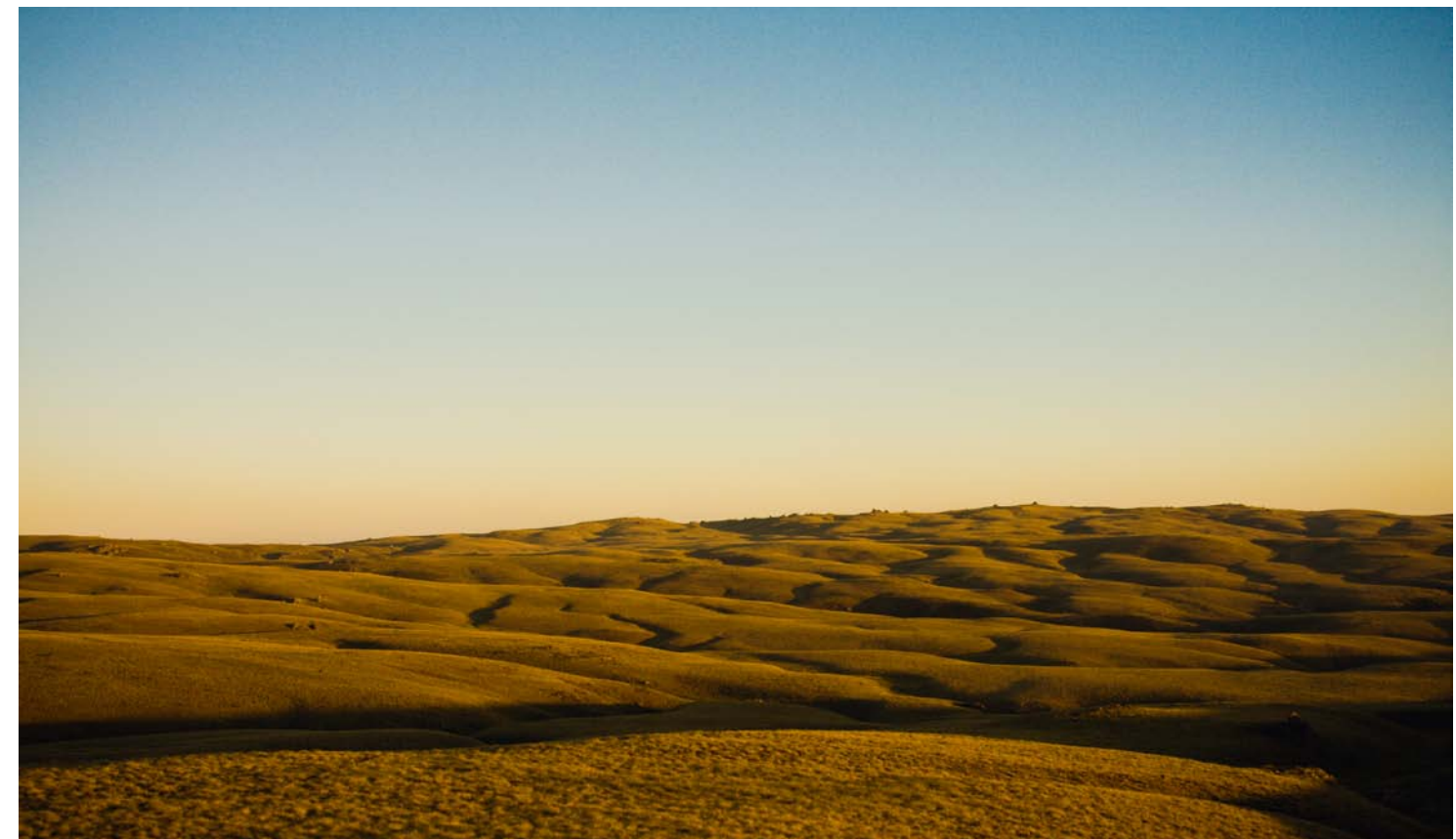
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NZ art enthusiasts might think this Maniototo image looks like a Grahame Sydney painting. He does indeed live nearby.

## Fly yourself to the Maniototo

Ruth Allanson visited some old home territory for this edition's Place to Go, bringing back childhood memories of landing at a hotel for lunch when flying past. It can still be done.

**Maniototo** Plains or just 'The Maniototo', as it is known, is a large elevated plain of inland Otago surrounded by the Rock and Pillar range to the south east, Rough Ridge to the west, the Kakanui ranges to the north east and the Hawkdun range to the north. The ranges are significant landmarks to pilots for navigation as they

all have prominent shapes representing the fault lines that they lie on. The round top mountains are high enough to keep the cold in during winter, and attract strong sun in summer. Record temperatures occur at both ends making it a great ice-skating and curling area and a very hot place to visit in summer. I can see why the artist Grahame Sydney was so inspired to paint these amazing landscapes.

When I was a child in the back seat of a flying machine, there were airfields all around the area, and I fondly remember stopping at Patearoa Hotel for lunch many a time as we passed by in either



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The Vulcan (formerly Ballarat) Hotel was built of mud brick in 1882.



Even older is the 1878 Royal Hotel in Naseby.



the Cessna or Hughes. These days the strips have mostly gone, as farms advance and generations move on. Many visitors now go about the area on bicycles, after the creation of the Otago rail trail. The train tracks were removed in 1989 and the land purchased by DOC to begin the trail in the mid '90s. Enjoyed by thousands and revitalising tourism in the area, it was also the beginning of what is now a vast network of bicycle trails throughout our country.

With some research I found two airstrips available for the use of our readership. John Mathewson's field at Kokonga, is 10 miles SE of Ranfurly, where the Kyeburn and Taieri rivers meet, and the other is 10 minutes walk from the Vulcan Hotel. Maniototo is such a vast area that these airstrips make for a great weekend out flying but to really explore the area, you need to spend some time on the ground once you have completed your reccie from above.

John has three vectors at his grass Kokonga strip and they are from 500m long to 690m. He has sheep grazing at times and it is available for use at any time. There is no fuel nor facilities, but John is one of the old school; he has a hangar full of planes that he doesn't have time to use and is well worth landing for a chat. Take your picnic basket and park off the runway as the local club uses the airfield as well. Contact John on 03 444 9345.

When the rail line arrived at Ranfurly in 1898 the town boomed, taking over from Naseby's prior 1860s gold rush success. Ranfurly expanded during the 1930s as a service centre to the local farmers and also the nearest place to the sanatorium where friends and family could stay. The Waipata Sanatorium was a privately owned facility for TB sufferers, as the dry fresh air was thought to help those with the disease.

My father remembers a flying visit to the hotel in Ranfurly which he described as very grand with a big wooden staircase,

when the town was still thriving. He landed his C-180 at the airfield north of the town and had his father-in-law pick him up. Grandad complained bitterly about how far out of town this airfield was – a common complaint and perhaps why this airfield is not longer in existence. Even though Ranfurly is now very quiet, there is a recently opened new hospital in the town and the rail trail does provide for various accommodation and eating options.

Another airstrip that is still available for use with permission is just above St. Bathans. It belongs to Tony Enright who can be emailed at: [tony.enright@windowslive.com](mailto:tony.enright@windowslive.com). He can put you in touch with Tom who looks after the farm and can give you a brief on the airstrip and the stock. It is then a ten minute walk down the hill to St. Bathans. Tie the plane down before you walk away; Central Otago is well known for its wonderful lenticular formations and the nor'wester can blow up without warning.

When I was growing up, this town had a strong allure to it because it was surrounded by a good old fashioned ghost story. Back in the mining days, the town boasted 13 hotels with 2000 people living there. These days the Vulcan is the last hotel left, built in 1882 and formerly known as the Ballarat Hotel. It still provides meals and accommodation for passers by and Jude, who runs it is a real character, ph. 03 447 3629. She tells me the mystery haunting does still exist in room 1 of the hotel. The story goes that an itinerant young prostitute called Rose was found strangled in the room with her money stolen. Thus the ghost of Rose only hassles men who stay in Room 1, with many reporting waking with a weight on their throat. Rose is also often seen on the couch in the hotel and amuses herself with things like boiling the jug - without turning it on. Alternate accommodation can be found at the local police camp where you can stay in the town's

historic jail: [www.stbathansnz.com](http://www.stbathansnz.com)

St. Bathans attracts many tourists who are interested in the town's beauty and history which includes numerous gold rush era buildings that are still standing. For the six permanent residences that live here, life can be very busy indeed.

Naseby is another town that shrank quickly after the rush (at its peak pop. 5000) but has continued on by diversifying and maintaining its historic buildings – creating a town akin to a working museum. Early on, forestry planting was followed as an economic strategy. The extremes of the hot and cold temperatures mean that trees grow very slowly however this helps to create extremely strong wood which fetches a high price. Naseby is also home to indoor ice rink and hosts many curling competitions. Plus there is the Southern Hemisphere's only outdoor luge. We visited in winter and I can see now why there is a box of woolly hats at the door...it is just as cold inside the ice rink as it is outside. At 2000ft, there is often snow in winter and you can even go for a sled ride with actual sled dogs; Malamutes and Alaskan Huskies. Nigel and Rose also run a shop that is everything dogs: [www.realdog.co.nz](http://www.realdog.co.nz)

I can't leave this area without mentioning the great food and accommodation on offer at the Dansy's Pass Coach Inn - one of the very last coach inns which has been preserved and tastefully updated to keep with in its era. Again, there is room for landing a helicopter near the hotel which my parents did on occasion to spend a weekend there.

The Maniototo is spectacular with ancient landforms and an interesting history with very hospitable people. Anytime of the year is a good time to visit this Place to Go.

Ruth Allanson



It's either very hot or very cold in the Maniototo.



Kyeburn Diggings. The area is full of gold mining history.

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## Power - the future of Gliding?

More and more gliders are coming equipped with a power source for launch and/or sustaining flight. Is this therefore the future of the sport? Jill McCaw considers the options:

The difference between gliders and power planes is that gliders don't have engines. Right? Gliders use the energy in the atmosphere to climb and to go places. It's what makes our air sport different and more challenging than power flying. It seems paradoxical that more and more gliders are now coming equipped with engines.

Bernard Eckey, a SoaringNZ correspondent and the Australasian agent for Schleicher aircraft surmises that this may be the saving grace of the sport. He explains some of the reasons for this. "Today's time-poor pilots expect to fly for as long as they want and explore terrain out of gliding range without risking an out-landing and missing out on a planned evening activity. In other words, just like

power pilots, many of our members prefer total independence and flying with some sort of predictability. Aviating with greater peace of mind is exactly what makes power flying popular and is the main reason why all types of power flying clubs have enjoyed tremendous success over recent decades. Perhaps it would be a good idea to learn from our powered friends and offer our members flying with the individual freedom that only a motorised glider can provide."

For many years there have been some gliders that have had engines, but they were the exceptions, not the norm. Often, the power unit is the familiar light aviation Rotax engine. Mostly these petrol engines have been fitted on a pillar in a bay in the fuselage behind the cockpit. They are raised for use, to self-launch or to self-retrieve, and stow away to allow the glider to be a pure sailplane when not needed.

I've had several flights with champion pilot Terry Delore in his two-seater self-launching ASH 25. When the engine is

running this is LOUD. And, sitting in the back seat, it's right behind your head. The relief when we've achieved an acceptable height and turn it off is huge. There is no way you would run that engine if you didn't have to and Terry rarely uses it once he's airborne. It does its job and that's all that he asks of it. However, in terms of loud, there's probably no glider that can beat the South African JS stable of gliders, with jet sustainers. It might be a small jet, but it still sounds like a jet.

Some gliders, such as the side-by-side two-seaters, the Stemme, the Dymona and particularly the Pipistrel Taurus, are closer to a true hybrid power plane/glider. In fact, the Pipistrel has interchangeable wings – short wings = power plane; long wings = glider. I've flown in a Dymona under power and while there was engine noise it was definitely quieter than the ASH and probably on par with a 172. Headphones were still necessary. With a wider fuse and triangle undercarriage arrangement these craft look different from most gliders. Generally though,

power gliders can't be told apart from a non-powered version unless the engine is deployed. Their performance as pure gliders is exactly the same as their cousins.

With better engine technology, self-launching gliders have become more popular and the glider manufacturers include a powered version of most of their standard ships. But the game changer may well be electric engines.

Bernard Eckey says, "New battery technologies combined with the latest breed of highly efficient brushless motors leave no doubt that – at least for the recreational aviation sector – the future belongs to electric drive systems. Their simplicity combined with their low maintenance requirements and their unrivalled operator friendliness has them capturing an ever-increasing share of the market. Yes, the usual scepticism towards new technologies may linger for a while but the list of advantages is simply too long to be ignored. Who wouldn't like to fly super quiet vibration free aircraft, very simple to operate, having no power reduction at altitude and – last but not least – having no fuel smell or exhaust fumes."

And the engine and propeller don't have to be behind the cockpit. Front Electric Sustainer (FES) motors have the propeller at the nose, folding back along it when not in use. While a FES equipped glider can't self-launch (there isn't enough ground clearance) the benefit of being able to start an engine and get home on a weakening day gives a pilot the reassurance Bernard mentions above. There is no need to face a land-out and all the bother of being retrieved. It allows the pilot to more comfortably fly over difficult terrain or enjoy a marginal day. FES is becoming very popular on 'club'

type aircraft. They're easy to use, start at the touch of a button and shut down just as easily. There is no need to feather the prop before folding the engine away, all of which adds considerably to the workload of the pilot.

However, it is the gliders with self-launch capabilities that have the biggest chance of changing the sport. Bernard describes Schleicher's newest multi-purpose glider. "The AS 34 Me cannot be beaten for trouble-free club use. It is equipped with an air-cooled EMRAX motor which give the AS 34 Me self-launch capabilities with an impressive climb rate of 3.7 m/s (7 knots). It gets the AS 34 Me to 2,000 feet in just three minutes. Best of all, it leaves enough juice in the batteries for a further climb to 7,400 feet – more than some 2-stroke petrol engines and more than enough to get cross-country pilots home when thermals quit their services much earlier than expected. At long last, a simple and very easy-to-operate electrically powered glider has come on the market. With integrated wingtip wheels it allows fully independent operation – something many glider pilots have long been waiting for."

The fact that more and more of the new gliders arriving in New Zealand have self-launch capabilities show that powered gliders are becoming mainstream. It seems unlikely however that gliding clubs will disappear as most pilots find the need to goggle with their kind to share tall tales of thermals to 10,000 feet and waves into the stratosphere.

If you've be interested in gliding, check out the Gliding New Zealand website to find the club nearest you.

Jill McCaw 



The FES (Front Electric Sustainer) is an option available on several different types.



ASG 32 EI with retractable 34 hp electric power.

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Bryan Cox and P-40 Kittyhawk. Bryan trained on Harvards and the P-40 before going on to fly Corsairs in WWII.

## Battle of Britain FlyPast

One of the annual events on the NZ Warbirds Association calendar is the Battle of Britain Fly-past over the Auckland cenotaph which this year included a noteworthy guest of honour riding in the back (and at the controls) of Frank Parker and Liz Needham's Kittyhawk. Frank tells the story of the day:

The annual Battle of Britain Memorial Service at the Auckland Cenotaph is arranged by the Royal New Zealand Air Force Association to commemorate the sacrifices made now 79 years ago. The Service is held on the closest Sunday to the 15th September which is acknowledged as the height of the Battle.

Appropriately, for many years a fly-past by Ardmore based aircraft has been organised to support the service. Back in the 1980s (as far as I can determine) this was arranged by the Auckland Aero Club however for the past 20 years plus, the honour has been bestowed on our NZ Warbirds Association. Pre-planning for

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Seven Harvards and numerous other warbird aircraft participated.



Doug Brooker's Tr.9 Spitfire led the formation.



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the event starts a month or more earlier, establishing what aircraft and pilots are available after the winter hiatus. A week out the weather watching commences as September in Auckland is anything but predictable and finally a couple of days out the detailed planning begins.


The task of 'Herding the Cats' is passed to NZWA Chief Flying Instructor, this year once again Dave Brown.

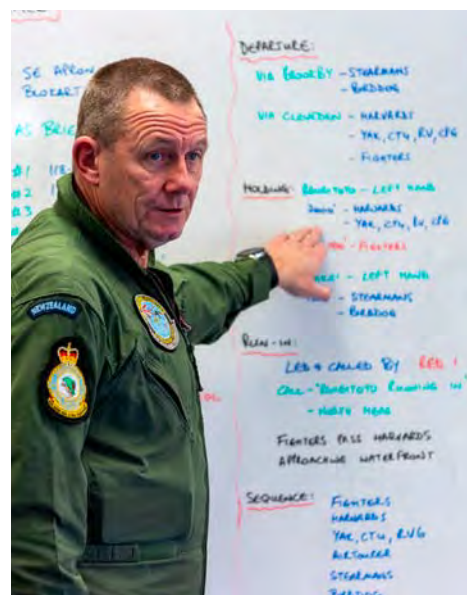
On the 'Day' it's an 0730 start to get aircraft out of the hangars and pre-flights completed before the General Brief at 0900. This is followed by individual element briefs before first engine starts at 1045 for an 1110 time on target at the Cenotaph.

This year we had 16 aircraft participate in the fly-past which was led appropriately by the resident Spitfire along with the P-40 Kittyhawk (representing Pacific action), seven Harvards, and a composite group of mini-warbirds and civvies.

To get this number of aircraft airborne from Ardmore, to suitable holding areas, conduct the fly-past and then recover to the field requires sound planning and adherence to that plan. Once again this was achieved with little or no fuss, a testament to the professionalism of all concerned.

It is also worth noting that the participating pilots do so 'free of charge'; in fact we all view it as a privilege to honour 'The Few' who in the skies over England preserved our freedom two generations ago.

Regards, Frankly@xtra.co.nz 



CFI Dave Brown conducts the briefing.

## The Battle of Britain

September marks the beginning of spring in the southern hemisphere, autumn in the north and 79 years ago the height of the Battle of Britain.

The Battle of Britain was the first major military battle waged almost exclusively in the air. The English recognise it as starting on 10 July 1940 and ending on 31 October 1940 with the main action being the 'Blitz', the large scale night bombing of English cities from 7 September 1940 until 10 May 1941. The Germans recognise the dates as July 1940 until June 1941, the end of their bombing offensive over England.

Following the conquest of Western Europe the German objective was to compel Britain to a negotiated peace settlement. To achieve this they commenced a sea blockade of coastal shipping and major ports in July 1940. On 1st August 1940 as a prelude to Operation Sealion, the proposed invasion of England, the Luftwaffe was directed to achieve air superiority over the RAF, targeting airfields and infrastructure.

Germany's failure to destroy Britain's air defenses and force an armistice, or outright surrender, is regarded as the first major defeat of the Nazi forces. The 'Battle of Britain', takes its name from a speech by Winston Churchill; "what General Weyland called the 'Battle of France' is over. I expect the 'Battle of Britain' is about to begin".

## The Guest of Honour

At this year's fly-past it was my honour to have well known aviator Bryan Cox ride 'shotgun'. As many of you will know, Bryan was a RNZAF WWII pilot who served in the Pacific Theatre and then the Japan Occupation Force. He had learnt to fly in New Zealand, the Harvard and P-40 being part of the training programme en-route to flying the Corsair in operations.

Post WWII Bryan had a distinguished career as a flight instructor.

Bryan's first flight in the P-40 was his first solo on type. It literally was: fly the Harvard, receive briefing on the P-40, go flying ... Accordingly it was a privilege for me to have him on board during this fly-past which also included some air to air photography. Once the formal part of the flight was complete it was of course appropriate to offer the maestro the opportunity to have a play with his old horse; a question I didn't need to ask twice! Medium turn left, then right, steep turn, wing over, "how about an aileron roll Bryan" "Okay" and "best have one to the right"!

All too soon we were back at the field. What a morning; a fly-past in formation with the Spitfire, air to air photography, antics with a legend... Some days you get lucky!

Post flight, after a 10/10 landing (I must say) I asked Bryan "did I pass?" He cheekily replied, "well not quite". I think he wants to come back next year!



Bryan Cox



Bryan and Frank



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Gavin Conroy has photographed all three Mosquitos to come out of the Avspecs hangar at Ardmore. Yes it's a composite image, but maybe one day...





Boeing B-17G Flying Fortress "Sally B" flew over from Duxford to display at the show. It's only about 10 minutes flying time from Duxford.

## Return to England - The Shuttleworth Collection

For the last few years, regular KiwiFlyer Contributor and photographer extraordinaire Gavin Conroy has made an annual trip to England, photographing warbirds during their air show season. He thought last year might be the last, until this year proved too tempting again. In this issue Gavin profiles the Shuttleworth Collection. In the next issue we'll cover Duxford as well. Gavin writes:

**I could** not help myself. I just had to head back to England this year as some Warbird opportunities presented themselves which I could not say no to.

Events began on July 7 with the 2019 Military Aviation Show at Old Warden hosted by the Shuttleworth Collection.

This show turned out to be memorable for several reasons. First up was a formation of seven Hawker Hurricanes, the first time

a formation of this size had been seen since the 1940s. There were meant to be eight but one Hurricane from the BBMF (Battle of Britain Memorial Flight) broke a brake shoe and getting replacements is not so easy these days. Seven was plenty though. They flew one formation pass, then one Hurricane broke off for solo passes while the others displayed in groups of three. It was lovely to see.

Normally when you go to a show at Old Warden you don't expect to see types like the Extra 300 flying displays - especially during the annual military show. On display this year were four Extra 300s operated by the Royal Jordanian Falcons aerobatic team. They received the latest version Extra last December which is said to have transformed their display and boy they were not wrong! The formation flying was as close as you will ever see; a bit nerve wracking at times but wow do those guys know how to fly!

The usual Old Warden favourites were there along with visiting aircraft like the P-47D Thunderbolt which came over from Duxford, displayed by Stuart Goldspink. He landed at Old Warden after his display and the commentator said he now holds the record for the heaviest aircraft to be landed there.

A real treat was seeing the Edwardian era aircraft fly. Following several visits to Old Warden to try and see this for myself, my patience was rewarded with some very special machines making multiple passes. The wind must be pretty much nil, and fortunately it was - so we saw types like the Bristol Boxkite and Avro Triplane fly in the late afternoon sun. It was amazing to watch these wonderful machines fly. Once the show was over, I said to my friend who took me there, "It was such a great show that I would not be bothered if I missed Flying Legends". There were so many unique aircraft that flew that day, many of which I had not seen before. It was a fabulous way to kick off this year's trip.

Gavin Conroy 

*(Ed. Gavin then moved on to Sywell for some air to air flying with the collection based there, and then on to Duxford for the Flying Legends show. Part two will appear in our next edition.)*



The Blackburn Mono Plane is an original aircraft built in 1913, the oldest British aircraft to be flying worldwide.



Bristol Boxkite Replica. An amazing sight to behold.



Avro Triplane from the Magnificent Men in their Flying Machines movie.



Air Cadets aerobatic glider display was a highlight.



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Jordanian Falcons aerobatic team in their upgraded Extra 300s performed an impressive tight display.



Sopwith Triplane replica.



Gloster Gladiator.



7 Hawker Hurricanes flying in formation, thought to be the largest formation of Hurricanes since WWII.



Avro 504K.



Polikarpov PO 2 was once based in New Zealand.



Another Avro 504K.



DH-82A Tiger Moth.



FW-144.



Nieuport 11 Replica.



Supermarine Mk V Spitfire.



Westland Lysander, one of only 3 flying worldwide.



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## GAA Matters

*An update from the General Aviation Advocacy Group*



In his latest TV3 Newshub coverage of the CAA, reporter Michael Morrah revealed that there is to be an independent investigation of the Civil Aviation Authority. This revelation went virtually unnoticed, because it was buried in Morrah's exposure of problems within the CAA-controlled Aviation Security Services.

Avsec team leaders stand accused of allowing people to board flights with illegal items.

It is alleged that bullying, harassment and ineffectual leadership are endemic within the lofty floors of the Asteron Centre, which is expensively occupied by the CAA and Aviation Security.

Acknowledging a problem that seems to be spreading like a current measles outbreak, CAA Director Graeme Harris said that the allegations suggest "systemic and broad-ranging issues" including "a culture of fear" where people are scared they will be targeted if they speak up.

Hello? Haven't we heard this before?

Harris has appointed QC David Laurenson to investigate these serious allegations and report back to him.

But this action might be viewed as an exercise in damage limitation, in view of the government's intention to establish an independent investigation of the CAA, reporting to the Minister of Transport. Such a review is what GAA supporters have been pushing for since early 2018.

It is abundantly clear that a root-and-branch investigation of the authority (and possibly TAIC and even aspects of the MoT), followed by decisive remedial action, is inevitable.

The GAA welcomes an independent, external investigation of the CAA. We believe it must also determine the competence of the CAA Board members with respect to their knowledge of the aviation sector, and weigh the board membership to see if it is fairly balanced.

The structure and performance of the board has been a matter of controversy since its mismanagement of one member's conflict of interest. Board Chairman Nigel Gould, who was highly critical of the GAA's 2018 dossier of evidence against the CAA, dismissed our customer satisfaction survey of the authority and questioned the motives of CAA whistleblowers, was eventually forced to resign.

The GAA believes that investigators should also examine whether the MoT has competent staff with sufficient specialist aviation knowledge to provide reliable advice to the Minister.

The MoT's blind acceptance of advice from CAA managers and even Treasury officials, which has happened, is no longer acceptable. There must now be full engagement of MoT staff in consultations – and if there is resistance, the culprits must be forced from their comfortable silos.

If you are considering a complaint about the Civil Aviation Authority using the Ministry of Transport's "issues" hotline, beware. Don't bank on anonymity.

The GAA tried to obtain undertakings from the MoT about the safeguards which should be in place to protect informants' identities. The ministry says it cannot promise this because, under some circumstances, it might be legally compelled to divulge your personal information.

If you're content to have your right to privacy waived by the MoT and still want to lay a complaint, the mailbox address is [issues@transport.govt.nz](mailto:issues@transport.govt.nz)

**More on this and other topics of importance  
to General Aviators at [www.caa.gen.nz](http://www.caa.gen.nz)**

*Brian Mackie / GAA*

# The KiwiFlyer Guide to Aviation Training

October 2019 Supplement



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# Where to complete your flight training?



This image is from the annual Walsh Memorial Scout Flying School at Matamata. Having been bitten by the bug, where to next?

KiwiFlyer Contributor (and A-Cat Flight Instructor, GA Flight Examiner, ATPL ground instructor, and international pilot with Air New Zealand), Mark Woodhouse knows a thing or two about flight training. With such a variety of training establishments on offer, he is often asked what the best option is. The answer as Mark outlines below, depends...

**I am** often asked which flying training organisation is best, but I will never give you a straight answer, for no better reason than "it depends". It depends on so many factors such as your age and personality, your long-term goals, your home location, your learning style and not least, your financial situation.

Flight training requires you to make a massive investment, in time, emotional energy and money. Lots of money. This article tries to give you some guidance on answering the very important question - Where to train? In no particular order...

New Zealand is very fortunate to have a number of aero clubs around the country, most if not all, affiliated with the Royal New Zealand Aero Club (RNZAC), trading as Flying NZ. However, aero clubs vary widely in terms of size, strength, aircraft type(s) available, the experience level of their flying instructors and whether the aero club can give you access to student loan funding. At the very least I think you should explore the club(s) near where you live. If you are looking to commence your training while continuing to work, the local aeroclub may well be your most suitable option.

A very strong argument can also be made for joining your local aero club anyway, even if you choose to do the bulk of your flying training elsewhere. Aero clubs usually have an active recreational and competition flying calendar and will likely give you the opportunity to mix with, fly with and learn from a wide range of

experienced aviators.

There are a growing number of recreational flying organisations, ranging in size and style, that are certificated under Civil Aviation Rule (CAR) Part 149, and which offer flying training on microlight aircraft. Many types of aircraft, certificated in the microlight category, are very high performance and capability, more so than some 'normal' training aircraft. However, there are currently fairly significant limitations on cross crediting flight training time in microlight aircraft across to private, commercial and air transport pilot licences issued under CAR Part 61, so think carefully about your long-term goals. Nevertheless, this may be an option if you are only interested in flying recreationally and do not expect to continue on to a private or commercial licence.

New Zealand has many commercial Flight Training Organisations (FTOs), ranging in size, style and target market. Some FTOs are relatively new and relatively small, some are relatively small but have been training for many years, some are focused on overseas students and some are focused on training students for relatively 'direct' entry to various airlines. Although I use that term hesitantly, as some FTOs will tell you they will get you into an airline at the completion of your training, but the actual outcomes may be different. Given that they are commercial businesses, they often have slick marketing packages, be careful what you believe and do your own research before committing.

Try to gauge a commercial FTO's financial strength. Over the years a number of FTOs have gone into receivership, leaving their students in all sorts of strife. This includes one FTO that went into receivership very recently, although I have not yet heard how well their students are being supported, or not. If an organisation is competing on the basis of price, be careful to assess whether the quality of their training and the longevity of their support will be

adequate for your needs.

Some commercial FTOs offer flight training for CAA licences, blended with an academic qualification. This may range from 'Diplomas' which have little or dubious recognition, through to the New Zealand Qualifications Authority (NZQA) certified Diploma in Aviation (Level 6) and on to University based degrees. An academic qualification might be right for you, but it is not right for all. While some might tell you otherwise, it is my opinion (and observation!) that you do not need an academic qualification to get into the airlines. An airline will usually take those they perceive as the best available applicants, and in times of shortage they tend not to focus on the luxury of an academic qualification.

In New Zealand there are a limited number of student loan funded positions available, usually by commercial FTOs but also by some aero clubs. The amount of funding support offered by the government each year is limited and is demonstrably not keeping up with inflation, so even if you are successful in being offered a 'student loan funded position', you will probably need to come up with additional personal funding, especially for helicopter students.

For some, the RNZAF may be an avenue worth considering. That said, the RNZAF is much more than just flight training; the RNZAF is a commitment to a career in the armed forces, and all that that entails. Yes, they fund your training, the equipment is advanced and expensive, and your instructors will be highly trained and highly experienced aviators. But that training is for much more than just to fly an aircraft, they train you to be a leader of teams of personnel. The pilot role is called a GD(P), i.e., General Duties (Pilot). My understanding is that there is currently a ten-year return of service obligation, but there are few better ways to spend ten years!

Finally, I'll talk a little about DIY flight training. In New Zealand there is currently no legal requirement for flight training to be undertaken by a 'certificated' or 'approved' organisation. You can gain training and be credited training experience toward a licence as long as your flying instructor holds the appropriate, current qualifications. If you have family or friend connections with access to a suitable aircraft and instructor rating, you can be trained by them. In fact, at one time one of my sons considered continuing his pilot training and we seriously considered purchasing an aircraft and doing it together. That said, I very strongly recommend having an independent examiner do the flight tests. A very important principle of quality training is the separation of the training from the checking. Flight tests should be an independent, objective sampling of the standard of training achieved.

I'll end by encouraging all students, and their supporters if applicable, to make a short list of places they think they might like to learn to fly at, then visit each. While listening to the organisation's 'pitch', also create the opportunity to talk to the students that are already there. They will give you an invaluable perspective and the opportunity to make the important decision of where to train for yourself.

And one final thought, it is my heartfelt hope that you will not fall into the trap of trying to complete your training 'on the cheap'. It's just not worth it! The cost of ignorance, a lack of skill and/or a poor attitude can be your life or the life of others. None of us know what we don't know when we start something new - we all need high quality practical flight training, theory resources and positive support.

Fly safe!

Mark Woodhouse



## About this Guide

WELCOME to the KiwiFlyer Guide to Aviation Training in New Zealand. This special annual supplement includes articles related to aviation training as well as profiles and some great advice from leading flight training providers from around the country.

Participants in this Guide cover a broad training spectrum and readers will find a wealth of opportunity whether it be a microlight certificate for Sunday flying, a PPL to take the family on holiday by helicopter, through to fully structured programmes designed to set the career pilot up on a fast track to airline employment.

There are articles covering how to get a cost-effective start in aviation whilst still at school, how to choose a flight training provider, building good foundations, microlight versus certified aircraft options, and incorporating academic studies into an aviation career. There are also many snippets of wisdom amongst the various training provider profiles.

More than 1000 copies of this issue of the magazine are being sent to Careers Officers at every NZ Secondary School and students interested in aviation will find much useful information within. Aviation training is not limited to just practical and theory tuition either. Academic opportunities abound for University degrees in aviation disciplines that can extend all the way to Doctorate level research.

There is also much included for existing pilots to consider in terms of getting current for summer or refreshing and extending skills to a higher level. How about adding some ratings to your licence, undertaking aerobatic or other advanced training, or learning to fly a glider. As well as the fun of learning, those are all skills which could be very helpful to have someday.

Even those who might not be immediately interested in training for themselves should find it interesting to look through this guide and observe the many and varied training approaches that are available. The range extends from small companies and personal one-on-one tuition through to large corporates with fleets of aircraft, an array of lecture facilities and purpose built student accommodation, and everything in between.

In most cases, participants in the guide provided their own material for publishing and often are speaking directly to prospective students. Several have taken the opportunity to tell of student achievements that they are justifiably proud of.

Our industry is a close one and word of mouth is a frequent and trusted form of recommendation. If someone asks for your advice on matters of training, please refer them to this Guide which is also available for download from our website along with most other KiwiFlyer articles and back issues.





# Instructor or Airline or Both?

## Ardmore Flying School caters for all options

**When** the initial passion to want to fly bites our young it is normally one of two things that ignites it – Military flying (particularly pictures of jets) or Airline flying (pictures of Captains and crew). Traditionally, ‘becoming a pilot’ meant aiming down of these two career paths. It was not often that the thought of being a Flight Instructor fired up a young ‘wanna be’ pilot.

Aviation career choices have changed in recent years however. As flight instructors are in more and more demand, particularly B Category and multi-engine instructors, flight instruction is becoming quite a viable and enticing career.

Salaries and working conditions are becoming more attractive – especially the work-life balance aspect. Flight instructors get to come home every night (no overnight duties away from home in all too familiar hotel rooms), generally have more flexible working arrangements to make the most of weather, and often have the flexibility with their employer to have time available to attend to those important family matters – bank appointments, children’s sports days, school holidays etc.

Combined with the challenge of being able to develop professionally through the instructor ranks and with added skills and ratings, instructing now begins to look like a viable career option that can be held in high regard. The days of the flight instructor being seen as a ‘wanna-be’ airline pilot are fading and the sooner that perceived stigma is removed from the industry the better.

But what if you want to be an airline pilot? Great – the opportunities today are better than they have ever been with demand internationally that has been growing for some time now. Even if this demand dips in the next year or two there are still fantastic opportunities available to begin your career as an airline pilot. Direct entry into an airline is still rare in New Zealand, with most such opportunities only available offshore. While not impossible for domestic students, it is more likely that this training pathway will apply to international students, particularly those sponsored by an overseas airline. The reality is that most NZ domestic students will follow dual career pathways – flight instructor first then on to an airline second.

### Where does the NZ Diploma in Aviation fit in?

There is still debate over the value of an academic Diploma at Level 6 for pilot training. While some airlines prefer a new recruit to have an academic background (it is an indication of the ability to learn and commit) the pilot still has to have the necessary CAA licences and ratings before they can be employed and operate commercially. There is no doubt that the requirement to enrol in one of these programmes, especially to receive student loan funding in NZ, adds complexity and cost to the operation. Requiring international students to enrol in these academic programmes is even more complex and costly with even less relevance - as many theory papers, especially ATPL, are not transferable to other countries for licence purposes.

### Ardmore Flying School – catering for all options

At Ardmore Flying School we cater for all options – whether wanting to join an airline or other commercial operation directly, or to train as a Flight Instructor. In both cases either the Level 5 Training Scheme (Commercial Pilot and Instrument Rating) or the Level 6 Diplomas (Flight Instruction or Airline Preparation) are available.

Our experienced senior instructors, several of whom have committed to instructing as a long-term career are well suited to train and assess pilots at all levels. We are CAA Part 141 approved, NZQA Approved, a preferred provider for TEC student loan funding and a signatory to the Code of Conduct for the Pastoral Care of International Students. We also have CAAV (Vietnam) approval to train Vietnam Airline cadet pilots.

Ardmore Flying School has set up a Flight Instructor Training Unit with its own dedicated senior instructor(s), classroom and programmes. We train continuously throughout the year and employ most of those graduating from this programme.

Our Pacific Simulators EuroJet 4.5 A320 fixed base simulator provides an excellent platform to deliver the Multi-Crew Integration Course. This course, taught by retired airline Training Captains, is proving a significant benefit for those wanting to join an airline and begin type rating training. 36 hours exposure to

2-crew operations in this simulator provides a challenging but very enjoyable learning experience for those completing the Airline Preparation Diploma.

Student Loan funding is available at Ardmore Flying School – however, places are limited, and a comprehensive selection process is undertaken such that only the best candidates enrol under this funded option.

### Courses & Qualifications

Ardmore Flying School delivers the following components:

- Private & Commercial Pilot Licences
- Single & Multi-Engine Instrument Ratings
- New Zealand Certificate in Aviation Commercial Pilot and Instrument Rating (Level 5)
- C-Category Flight Instructor – New Zealand Diploma in Aviation – Flight Instruction (Level 6)
- Air Transport Pilots Licence Examination Credits – New Zealand Diploma in Aviation – Airline Preparation (Level 6)
- Multi-Crew Integration Course – MCIC - New Zealand Diploma in Aviation – Airline Preparation (Level 6)

### For more information

For more information on our training and employment pathways:

- Visit [www.ardmore.co.nz](http://www.ardmore.co.nz) or look us up on social media
- Call 0800 Ardmore or email: [info@ardmore.co.nz](mailto:info@ardmore.co.nz)
- Or come in and chat with one of our friendly team members who will guide you on the way to aviation success.



Multi-engine training in a Diamond Twin Star at Ardmore Flying School.



Classrooms are light, spacious, and air conditioned.



Training in Ardmore Flying School's Airbus A320 Simulator.



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# So much more than just a licence

Christchurch Helicopters offers commercial, maintenance, ground ops, and real-world experience to trainee helicopter pilots.



**Welcome** to New Zealand's premier helicopter flight training provider, nestled between the rolling hills of Banks Peninsula and the snow-peak jewels of Canterbury's Southern Alps.

Christchurch Helicopters is based at the Christchurch International Airport. Established in 2001, the company was NZ's largest helicopter flight training school with bases in Christchurch, Auckland and Invercargill. Over the years we have trained many students, contributing to a large number of NZ's professional helicopter pilots flying today, with many others flying all over the world in places such as Canada, USA, Australia, Asia, PNG and even Antarctica.

Christchurch Helicopters is Certificated by NZCAA under Part 135 (Commercial Air Transport Operations), Part 137 (Agricultural Operations) and

Part 141 (Check & Training). We are also accredited by the New Zealand Qualifications Authority (NZQA), as a Private Training Establishment approved to deliver the Level 5 NZ Diploma in Aviation and approved for student funding by the Tertiary Education Commission (TEC) which allows a limited number of students to access student loan funding and allowances for the Diploma Programme.

Our philosophy has always been to provide quality flight training to the highest level, in a safe and welcoming environment and to exceed the client's expectations.

At Christchurch Helicopters, we will go the extra mile to expand your knowledge. Yes, you will obtain a licence, but on leaving, you will have experienced much more and expanded

your knowledge beyond just meeting the minimum standards set by CAA. We will arm you with the necessary skills to make you employable.

Christchurch Helicopters operates a fleet of Guimbal Cabri G2 helicopters. These are the safest and most modern training helicopters you will find in the world. Christchurch Helicopters decided to invest in high quality training aircraft many years ago so as to provide our staff and students the best, safest available resource for training. Along with these aircraft, we have a varied fleet of turbine helicopters which students can obtain ratings on.

Along with our fleet, Christchurch is lucky enough to have one of the largest Low Flying Zones in NZ right on our doorstep, plus the beautiful Southern Alps for all-important mountain training

not far away. Between our fantastic Cabris, our training area and our bespoke Diploma Programme, no other flight school in NZ can provide you with the range of experiences, skills and knowledge that we can.

As we run alongside our training division a busy commercial operation, there will be opportunities for you to observe and be involved in activities outside your 'normal' training such as on lifting jobs, fires, frost protection and other commercial operations. Very few, if any training schools in NZ can provide the kind of exposure to the 'Real World' of helicopter pilots that we are able to. We are also the only major flight training school in NZ that has an agricultural division with an E-Category instructor on staff. This provides further opportunities for students to experience the 'Ag' industry if they aspire for a career in this sector.

We also maintain our own aircraft having highly qualified engineers on staff and as part of your course, you will spend time maintaining your aircraft with our engineers, learning more than just to be a pilot. So many skills and knowledge are

learnt outside just flying the aircraft and this is experience you won't find anywhere else.

Initially a ground-based position is the most likely role a newly qualified pilot will attain with an aviation company. The additional knowledge and ground skills taught within our Diploma programme will allow you to be well placed to secure this position ahead of other candidates.

So, it all starts here. When you commit to this training, and challenge yourself to achieve a career unlike any other, you will not regret the time and effort that is required. We will do everything we can to help you achieve your dream. Thus prepare yourself for a challenge that will provide you with a career unlike any other.

After many hours of study and training, our current students are at the exciting stage of finishing their programme of study. Therefore we are now accepting applications for our March 2020 Diploma intake. These student funded spots are very limited - contact us now for information on 03 359 0470 or email: [kevin@chchheli.nz](mailto:kevin@chchheli.nz)

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**Contact Kevin for more information**

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**E:** [kevin@chchheli.nz](mailto:kevin@chchheli.nz)

**W:** [christchurchhelicopters.co.nz](http://christchurchhelicopters.co.nz)





REPRESENTING AERO CLUBS THROUGHOUT NEW ZEALAND

# learn2fly



Aviation is an exciting, technologically advanced and innovative industry, which is growing exponentially. The demand for pilots, engineers, and other qualified support people is massive. In fact, the latest estimates from Boeing indicate that an additional 637,000 pilots will be required globally over the next 20 years – 40% of those in our Asia Pacific region.

Those who embark on a career as a pilot find it to be an exhilarating, challenging and rewarding experience! In New Zealand hundreds of pilots graduate every year – and a large proportion of these come from their local Aero Club. Aero Clubs offer some of the best all-round pilot training afforded in the aviation industry. In most cases there are no official academic prerequisites to undertake flight training. There is a common misconception that top results in certain subjects, eg mathematics and physics, is a requirement. Although a good grounding in science subjects and mental arithmetic is desirable, it is certainly not necessary. In quite a few instances it has been noted that once someone has started their journey towards their Commercial Pilots Licence, and in particular has reached their first solo flight, the study they have completed has flowed into their everyday schooling subjects.

Medical standards do apply, and to enrol in some training programmes, other criteria such as pre-screening interviews and aptitude tests must also be met. A number of Aero Clubs around New Zealand now run the Young Eagles program. This program is specially designed for students between the ages of 12-18 years old. It gives the students a basic understanding and introduction to the world of aviation. This allows the student time to work out if an aviation career is for them. As well as Young Eagles, some of these Aero Clubs work with Gateway to offer aviation trade subjects which can earn NCEA credits.

All in all, pilot training and ancillary aviation vocations are accessible to nearly all students who display a real interest or passion in any aspect of aviation. Your local Aero Club will be able to inform students of exactly what's involved and help them make the best decisions about their flight training and future aviation career.



www.flyingnz.co.nz



execsec@flyingnz.co.nz



0800 422 635

## Specialist MEIFR, RNAV & RNP Training

RidgeAir is a Twin Engine Charter and Training Operation based at Woodbourne Airport in Blenheim. The company is headed up by Ross McCullum who is Chief Pilot of their Part 135 Charter operation and also a B-cat advanced multi-engine IFR instructor.

The company provides niche multi-engine IFR training, specialising in Single IFR to Multi rating conversions, IFR renewals and recurrency and now most importantly RNP GNSS training and certification.

Over the past 10 years many students have passed through RidgeAir and completed their Multi Engine or IFR training or upgrade with Ross. More than 80% of these students are now employed full time in some flying capacity, either in GA or working for an airline.

### New Southern Skies

Ross has been heavily involved with the CAA NSS working group for the implementation of PBN/RNP operations in the New Zealand context.

After becoming concerned that the information available was confusing to many (not least himself), Ross wrote a paper called PBN for Dummies. He says the CAA liked it so much they asked him to present it at the New Southern Skies annual Conference 'Approach 18'. It was very well received and led to collaboration between RidgeAir and the CAA to implement the PBN Expo - whereby Ross and his co-pilot Bianca along with two representatives from the CAA toured both North and South Islands in their Piper Seneca. At numerous stops, they demonstrated the recent RNP avionics upgrades that had been done to the aircraft and provided advice gained through the RidgeAir PBN certification process which Ross had recently undertaken.

### RidgeAir's aircraft

The RidgeAir Piper Seneca is fully equipped and certified for all RNP operations, having a G500 glass cockpit coupled to a Garmin GTN 650 and Garmin 530W GPS.

The aircraft automation is complemented by a KFC 150 auto pilot and flight director system with altitude alerting, and is fully de-iced with an oxygen system for those times when a bit more altitude is required to avoid the



RidgeAir's highly equipped Piper Seneca is certified for all RNP operations.

weather. There's also a Freon air-con system for hot days.

Ross says the glass cockpit has been a real advantage to students that are coming up for an airline interview which is typically done in a very similar environment.

### Benefits for Trainees

Ross says the Seneca's glass cockpit and GPS combination is not dissimilar to what a pilot might expect say in a Dash 8 or ATR cockpit. Trainees get real experience and exposure to flying the glass cockpit and associated systems, plus using the GPS similar to an FMC where approach SIDS and STARS can all be loaded and flown using full GPS steering. The G500 also allows Vertical Navigation guidance for RNAV approaches which brings up a display the same as you would see when flying an ILS; these can be flown fully coupled to the auto pilot or hand flown using the Flight Director.

With his dual GA and Airline background Ross is able to provide very valuable training scenarios that better prepare students for their all important interview Sim Check.

Another benefit is that training with Ross is all carried out one on one – there's no waiting in a queue to get an aircraft or

instructor, and Ross can generally help out with reasonable cost accommodation as well as transport to and from training each day.

RidgeAir provides all necessary charts and documents plus Bose noise cancelling headsets. Rates are inclusive of Airways and landing fees aside from entries into Wellington, Auckland and Christchurch which attract a small additional charge. There is no charge for pre-flight and post-flight briefings.

RidgeAir can also provide and certify the ground theory component for initial GPS certification.

Students at RidgeAir looking to upgrade or renew their rating can typically be all done and dusted in 5-7 days due to the personal nature of the training – "You're not just a number here," says Ross.

### For more information

If you are interested in receiving personal one on one instruction from a highly experienced flight instructor who has a very practical approach with a commercial edge, then contact Ross at RidgeAir on 021 246 2544, email: ross@ridgeair.co.nz or visit www.ridgeair.co.nz





# Heliflite Charter and Training at Ardmore

To become great at anything you need to know your equipment inside and out. Based in Auckland at Ardmore Airport, Heliflite not only operates helicopters, but also repairs, builds, and maintains them. We are a one stop shop for everything rotary, and offer a full range of helicopter services including maintenance, training and commercial ops. All of our operations are certificated by NZCAA.

As well as learning to fly helicopters,

our students are able to learn about the maintenance that keeps them in the air, and our busy Part 135 charter operations also mean that students with us have the opportunity to gain valuable experience in a real-world commercial business.

Our large fleet of modern helicopters range from two-seater piston, up to large multi-engine turbines. We offer full training course packages in R22, R44 and Schweizer 300 helicopters.

We are also certificated by NZCAA to provide Robinson Safety Awareness training, mandatory for all new and existing R22 and R44 pilots.

Our private pilot programme focuses on training pilots to operate light helicopters as safely as possible, and our commercial programme builds on this by adding practical skills that are highly valued by commercial operators.

Our CPL students gain a lot of exposure to commercial-style flying as part of their course, and we encourage them to include a large amount of R44 time (which we offer at a very competitive rate) as part of their minimums to ensure they are in the best position to land that elusive first flying job. In the later stages of our CPL course, we treat all of the flying as though it was a commercial job which ensures that pilots are well versed with the legal and other requirements of flying for hire and reward.

Our standard CPL course includes two type ratings and an unrestricted night rating on top of the usual minimums if time allows. All of this commercial focus means that by the time our students obtain their commercial licence, they are ready to be a valuable asset to any flying organisation.

We have a great team of experienced and highly qualified pilots that include IFR rated A-Cat plus B and C-Cat Instructors, as well as a professional group of ground staff to ensure that you are guided through your training safely, efficiently, and with the minimum of fuss. Once you have your licence and have been signed off by our Chief Pilot, we have a variety of helicopters available for private hire. This means that you can take a helicopter away for private use on your own time, be it a trip to the beach for the weekend or just a flight around the city with friends.

If you are interested in what it takes to learn to fly helicopters, come along and try one of our 30 minute introduction flights. Our Instructors will give you a taste of everything, from pre-flight preparation through to the ultimate test of co-ordination - hovering! Our training rates are some of the best in New Zealand and we offer discounts for bulk training packages.

We welcome you to swing by to meet the team and enjoy a tour of our facilities at 57 Vicia Lane, Ardmore Airport. For more information contact Sylvia on 09 299 9442 or visit our website [www.heliflite.co.nz](http://www.heliflite.co.nz)



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# Southern Wings - Flight Training Professionals

Worldwide, airlines are expanding their fleets and schedules to meet the demand of global economic expansion. The world is facing a pilot shortage; now is the time to train to be a pilot.

Southern Wings is an Air New Zealand Preferred Flight Training Organisation (FTO). There are only four FTOs in New Zealand and Southern Wings is the only FTO with two bases. By choosing to train with Southern Wings as an Air New Zealand Preferred Flight Training Organisation, prospective pilots will be assured they are:

- Joining a flight training programme designed to produce commercial airline pilots;
- Likely to succeed as they have met airline styled entry criteria for programme selection;
- Interacting with airline personnel.

Southern Wings is interested in quality; we do not aspire to be the biggest, just the best. With bases in Auckland and in Invercargill, we have the whole country covered. Southern Wings students experience the opportunity to fly and

enjoy the variation of terrain, weather, controlled and uncontrolled airspace across New Zealand. Southern Wings boast highly experienced instructors who are passionate about flying and who want to share that passion and their experience with the next generation of professional pilots.

The New Zealand Diploma in Aviation at Southern Wings provides the training relevant to commercial considerations. From crew and passenger demands, or weather and air traffic disruptions, today's modern airline pilot needs the ability to manage all of these issues in addition to demonstrating well-honed flying skills and possessing an in-depth knowledge of modern aircraft systems. This course prepares you for the pilot's demanding and multi-faceted role.

The New Zealand Diploma in Aviation course that Southern Wings provides has three streams; General Aviation, Instructor and Airline Preparation. All students of these streams will complete a Private Licence (PPL) and Commercial Pilot Licence (CPL). After that the



Southern Wings' Piper Archer ZK-SWG at dawn.

completion requirements depend on the stream chosen. For the Airline Preparation stream, students will complete a PPL, CPL, and Multi-Engine Instrument Rating (MEIR) and, all of their ATPL theory. Then they will undergo a secondary selection process for entry into the Airline Integration Course (AIC).

The New Zealand Diploma in Aviation is student loan funded.

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# A Head Start for Young Flyers

New Zealand is well served by several organisations who make it their business to help develop interest from the next generation of aviation enthusiasts and professionals. Mostly volunteer based, these organisations offer a variety of ways a young person can become involved in aviation either for general interest, recreation, or with a career in mind. The information we featured on these organisations in our 2018 Training Guide was well-received, so here's a recap. Thanks again to Mark Woodhouse for putting the words together.

**So, you** like the idea of flying, but people have told you it is hard to get into and very expensive. Well to an extent it is, but you might be interested to hear that there are many individuals, organisations, programmes and events that will help you explore and progress your interest, some at little or no cost.

## The Walsh Memorial Scout Flying School

The Walsh is an annual two week tented flying camp held at Matamata in the Waikato for 16 to 20 year olds. The camp is a National School of Scouting NZ and is supported by The Royal Aeronautical Society and a number of major corporates such as Air New Zealand and Airways Corp, as well as many smaller companies, individuals and the local community.

The school is established for up to 44 Ab-Initio (which literally means "from the beginning") Students, 26 Returned Students and up to 4 Student Staff. Members of Scouting NZ have priority for places up to the end of August and then remaining places are open to all applicants. Overall about 40 to 50% of the students are from Scouting and about 25 to 30% are female, with that proportion growing. The school has been over-subscribed for many years now, so a ballot is run to determine which of the applicants is fortunate enough to gain a position. That said there are usually withdrawals for one reason or another, so the waiting list does get used.

All staff, instructors and controllers attend on a voluntary basis, with varying levels of support from their employers.

For more information go to [www.scouts.org.nz](http://www.scouts.org.nz) then click on National Schools/Flying

## Youth Glide

The Youth Glide Soaring Development Camp is a live-in event aimed at taking any gliding youngster, at any stage of flying, and helping them to develop further. These events are run by Youth Glide NZ which is a not-for-profit organisation providing education, tuition and training for all relevant skills necessary for gliding in NZ. Participating students range in ages from 14 to 24.

Instructors, tow pilots and other helpers give freely of their time and expertise, many of whom come back year after year. The programme is augmented by great educational and social events.

There is much more to Youth Glide than just getting young people into gliding; they benefit in many other ways such as providing positive interactions with adults and giving them goals for lifelong learning, recreation and careers. Over the years many great friendships have been cemented at these camps, with competition for places at future camps now becoming quite tough.

While Youth Glide began in Omarama and Canterbury a similar but separate camp is now being run at Greytown in the

Wairarapa and Youth Glide groups are now active in most gliding clubs. There is actually an awful lot of effort, time and money going into helping young people fly gliders.

For more information see the separate article later in this issue.

## The Air Training Corp (ATC) National Aviation Course

The Air Training Corp is part of the New Zealand Cadet Forces (NZCF) and is for both girls and boys aged 13 to 18. The NZCFs are a voluntary, disciplined, uniformed youth leadership training organisation and while they are not part of the New Zealand Defence Force (NZDF), they are directed by the Chief of Defence Force, on behalf of the Minister of Defence, and are supported in partnership by the NZDF and the community.

One of the major events within the ATC is the National Aviation Course, which is a week-long flying course held at RNZAF Base Woodbourne in January each year. While their friends were hitting the beach over the summer break, these ATC students spent the week studying everything from aircraft maintenance, pre-flight checks and radio procedures, to flying with a general aviation flying instructor. By the end of the course the ATC cadets aim to pass their flight radio exam and get their wings by making their first solo flight.

In the words of one parent; "... had an amazing time and came back so inspired and motivated. We were thrilled about her achievements, so whomever needs to hear 'thanks' we cannot say it enough!"

The National Aviation Course is now a well established and successful feature of the ATC annual calendar. The course enjoys a good level of financial support and awards from a number of very generous sponsors for which they are always most grateful.

For more information go to [www.cadetforces.mil.nz/about/air-training-corps.htm](http://www.cadetforces.mil.nz/about/air-training-corps.htm)

## ServiceIQ Aviation Gateway Training

ServiceIQ is the Industry Training Organisation (ITO) for aviation (including pilots), travel, tourism, museums, hospitality and retail, and is committed to helping young New Zealanders make a start in their careers.

ServiceIQ offers a wide range of training opportunities including the Aviation Gateway programme. The purpose of this programme is to enable schools to provide senior students (year 11 and above) with access to structured workplace learning that helps them to kick-start their aviation career by gaining foundation knowledge, skills and experience, and to gain unit standards while doing so.

A student's ultimate career role could be as a pilot, flight attendant, aeronautical engineer, airport operations manager, air traffic controller, academic, regulator, tourism operator, or many other related occupations. The Aviation Gateway programme can also help students make professional contacts that can open doors in the future.

There are two types of Gateway training programmes available, either a programme ready made by ServiceIQ, or a DIY programme, where your school's Gateway Coordinators select the best ServiceIQ products to create a tailor-made learning programme for you. Both programmes take place in the classroom

and/or an industry workplace.

ServiceIQ's Aviation Gateway training programme is a fantastic way for you to get a feel for what it's like to fly an aircraft, plus gain insights about other aviation industry roles. If your passion is to be a pilot, this first-time flying experience helps you gain acceptance into full-time flight training when you leave school.

You will do your training flight with a CAA qualified flying instructor at a local aero club during term time. The programme usually takes about 10 weeks, and normally runs between 1.00pm and 3.30pm. Students who successfully complete the programme will have gained:

- Up to 18 credits towards a national qualification;
- Up to three flights towards their Private Pilot's Licence (PPL);
- Real skills and knowledge of the aviation industry; and,
- An insight into many different career options.

ServiceIQ also offers a Gateway "Flying NZ" Flight Training Scholarship to a stand-out student who has successfully completed the Gateway Aviation training.

While the ServiceIQ Aviation Gateway training programme is not offered in all schools, it may be available in yours, so ask your school Careers Advisor, and if its not, encourage them to explore setting it up.

For more information go to [www.serviceiq.org.nz/schools/gateway-training/serviceiq-gateway-aviation-training/](http://www.serviceiq.org.nz/schools/gateway-training/serviceiq-gateway-aviation-training/)

## Young Eagles

Young Eagles is an aviation immersion programme for young people between the ages of 12 and 18. It is offered by many aero clubs under the auspices of Flying New Zealand (the trading name

of the Royal New Zealand Aero Clubs - RNZAC). Young Eagle members will get the opportunity to experience many different aspects of aviation, from visiting air traffic control units and maintenance organisations, through to flying in an aircraft, with an instructor of course. Young Eagles will have the opportunity to actually control the aircraft, experience how it works and to look down on the world from above.

Whether you are interested in aviation for a career or for recreation, or you are just curious to find out what it is all about, Young Eagles might just be the starting point for your aviation adventure. If you are interested contact your local aero club and see if they offer the Young Eagles programme. If the aero club in your area doesn't offer the Young Eagles programme, maybe your enthusiasm will encourage them to join.

For more information go to [www.flyingnz.co.nz/youngeagles](http://www.flyingnz.co.nz/youngeagles)

## To conclude

As you can see, there are opportunities out there which will help you learn about the aviation industry and help you take those first tentative steps toward either a career or a recreational interest in aviation. The opportunities I have touched on above may not be all that exist, and to the others I apologise for not mentioning you.

If you are interested, don't sit back and wait for it to come to you. My observation is that to be a professional in our industry takes a determined investment of effort, time and to some extent or other money. It is not easy, but there are those prepared to help you, and most aviation professionals I know are passionate about their chosen careers. If you want it - go for it. And don't let set-backs along the way discourage you. **Persevere.**

# Live the dream

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Wanganui Aero Club

## PPL, CPL, advanced ratings and microlight training are all available at the South Canterbury Aero Club



South Canterbury Aero Club's most recent fleet addition is this Cessna A150 Aerobat

**Situated** in the uncongested airspace of South Canterbury, surrounded by wide open space bordered by the Southern Alps and the sprawling coastline. South Canterbury Aero Club is ideally located to help you achieve your aviation goals with both professional or recreational training.

South Canterbury Aero Club and its professional instructors embrace club style flight training, meaning training at your pace, in your time, supported by our friendly team of instructors, club members and students who are interested in your success.

The club offers training in general aviation aircraft towards private and commercial licenses, as well as microlight pilot certificates in a late generation microlight. SCAC also offer Terrain Awareness, Basic Mountain Flying in real mountainous terrain, Tailwheel Training in our super cub, as well as Spin and Aerobatic Training in our Cessna 150 Aerobat.

Operating from Richard Pearse Airport just 3 miles north of Timaru City, means low training costs with no unnecessary holding, airways or tower fees and no excessive landing fees added onto every flight lesson.

Over the last four years under our current Chief Flying Instructor the club has maintained an immaculate safety record and maintained a better than 90% pass rate on flight tests for our students

including PPL, CPL and Instructor's ratings.

SCAC is nationally renowned for its strong youth flying including Young Eagles and Gateway programme, helping our youth members achieve credits towards their school NCEA certificates through their flight training achievements. Many of our youth members have also achieved large flying scholarships through FlyingNZ, helping them financially towards their flying goals.

Through learning to fly with us and becoming a South Canterbury Aero Club member you will have many opportunities to get involved with club activities outside of your regular lessons including fly aways, social events and regional and national flying competitions.

Many of our commercial students and instructors have gone on to fly in other commercial operations, including Ag flying, Sounds Air, Air New Zealand, Glenorchy Air and Air Safaris.



For more information please contact club CFI and Manager Aaron Pearce on 03 688 2355 or 0508 FLY TIMARU, send a text to 027 846 6287, email: [cfi@scaeroclub.co.nz](mailto:cfi@scaeroclub.co.nz) or visit: [www.scaeroclub.co.nz](http://www.scaeroclub.co.nz)

## Make the Southern Alps your playground while you learn to fly with Wanaka Helicopters

**Wanaka Helicopters** is a world-renowned flight school situated in Wanaka, surrounded by the spectacular Southern Alps. Family owned and operated since 1992, we are one of New Zealand's largest and most experienced helicopter flight schools. With ten highly experienced pilots on the team and a large fleet of helicopters our primary activities include flight training, commercial and tourism operations. Mountain flying is our specialty and we attract trainees from all around the world to learn from our knowledgeable instructors.

Chief Flight Instructor Simon Spencer-Bower is the country's most experienced helicopter instructor and his team of eight B and C-category instructors are highly experienced and well regarded as instructors and commercial pilots. With the Southern Alps on our doorstep, we have the best daily opportunity to provide advanced mountain training. Most trainees fly our seven two-seat trainers including R22s and Cabri G2s though many progress to working with our R44s and AS350s. Other aircraft are available for those seeking additional single-engine type ratings.

We are able to provide an excellent training programme for trainees in either self-directed study with PPL, CPL and specialist training or a comprehensive fully-supported NZQA-accredited Level 5 Diploma in Aviation. This is a two year full-time qualification with all flight theory ground courses taught at Wanaka Airport.

Diploma students also participate in seven flight safety and management courses in addition to eleven flight skills courses before gaining their CPL. As well as flying, trainees frequently have the opportunity to participate in loading, unloading, briefing and

working with our international commercial clientele to build personal experience valuable for early-career opportunities.

Our Diploma in Aviation students typically enter the workforce with three type ratings gained during CPL build-up and sling training including the R22 - the most common mustering helicopter in Australia and New Zealand, the Cabri G2 - the newest entry in light-training aircraft from Guimbal inspired by Eurocopter design principles, and the R44 - the aircraft new CPL pilots are most likely to fly as part of a commercial operation.

An established industry network is the key to kicking off a strong aviation career. Commercial and industry connection is an important focus for Wanaka Helicopters. At WHL, trainees are exposed through industry engagement in special events, which have included Robinson Factory Seminars, CAA SMS workshops, medical briefs and additional Fire and Emergency coursework to support Rural Fire responses using a fire bucket.

Successful completion also sets graduates up to exercise the privileges provided for by NZCAA in New Zealand ground operations, flight planning and assisting operators with their safety management systems. Student loans, NZ Maori Scholarship (up to \$10,000) and FeesFree funding (up to \$12,000) is available for eligible students which makes the Diploma a popular avenue for career-oriented pilots.

If you are thinking about taking the next step in your aviation career get in touch with us to discuss your options or stop by to visit our Wanaka base. Contact us on 0800 46 36 26 or check out our website [www.wanakahelicopters.co.nz](http://www.wanakahelicopters.co.nz) for more information.



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# North Shore Aero Club

## Auckland's Premier Flight Training Facility

**Aviation** is unique in the experience it provides, whether on the private or commercial scale. There's more to flying than sitting in a jet watching the autopilot fly for you, something which many organisations tend to forget. Who can forget their first trial flight and the feeling they experienced as the aircraft first lifted off the runway? Even after a thousand take-offs that first one remains special. It's that feeling that makes people want to learn to fly, to put in the effort so they may, one day, give someone else that same feeling as they pull away from the ground.

North Shore Aero Club provides that experience through training. We know there needs to be reward for hard work. The club aspect supplements the training, not only are trainees pushed towards becoming better pilots, but they're constantly given reason to want to improve. The environment not only fosters ability and a safety culture, but a desire to keep flying and try new things.

### Kick start your career with our NZQA Diploma in aviation.

We have been training pilots for over 55 years and with our excellent pass rates, NSAC pilots have experienced great success moving to airlines including Air New Zealand, Jetstar, Virgin Australia, Cathay Pacific, Virgin Atlantic, Qantas and Emirates to name a few. With airlines these days looking for more than just the basic qualifications, gaining a Diploma is the ideal way to upskill and with our NZQA accredited course, it couldn't be easier.

### Popular Individual Courses

All our courses are available as practical modules and individual theory covering everything from the recreational RPL and PPL, to the professional CPL, MEIR, and Instructor Rating. With NSAC's

experienced instructors, ideal location, modern aircraft fleet and top class facilities, the cost of training is extremely competitive.

We also offer theory ground courses which are one of NZ's most popular, with people coming from all over the country to take advantage and make those pesky exams a breeze. Full details and timetables can be found on our website which is continually updated as new course dates are released.

### Expert Quality Instruction and an Ideal Location

Good instruction is hard to come by and at NSAC we pride ourselves on our top class team. With two 'A' Category instructors and Flight Examiners on staff we have the expertise to provide comprehensive instruction in a concise manner.

Located on Auckland's North Shore, we are just a hop, skip and 25 minute drive from the Auckland CBD, up the Northern Motorway. Once airborne, you are immediately positioned within a large, un-crowded flight training area offering low flying areas, CTAs, CTRs, varied terrain and a number of friendly airfields to visit all within 15 nm. All this equates to very efficient PPL and CPL training and of course being only 8 nm away from Whenuapai Air Force base with its RNAV (GNSS), VOR/DME and ILS/DME approaches and our own RNAV (GNSS) approaches into North Shore, we are ideally located for completing an Instrument Rating.

### Welcoming Friendly Environment

Our friendly team at NSAC are waiting to discuss your options with you – we're open 7 days from 8am until 5pm or later during the summer months. We warmly welcome you to call in anytime and it will be our pleasure to show you around.



**NORTH SHORE AERO CLUB**

PPL CPL INSTRUMENT + INSTRUCTOR RATINGS



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# Mainland Aviation College

**"Where students come before all else"**

**Based** at the Dunedin International Airport and in operation for over 25 years, Mainland Aviation College has been highly successful with countless students now in the aviation career of their choice. In the most recent years Mainland Aviation College have at least 30 of their students now flying as Captains and First Officers for Mount Cook Airline and Air NZ. Others have chosen careers in Instructing, Ag Flying, Outback Flying, Charter Flying, Seismic Flying, and more...

Mainland Aviation College is in the unique position of having a successful Multi-Engine Air Charter division, Mainland Air Services Ltd. After gaining the required amount of hours with Instructing, students are then offered further training to fill positions in the Charter division, as they become available. This immediately gives those selected the opportunity to gain Multi hours which are priceless in some areas of aviation – and puts them a step closer to realising their dream.

Mainland Aviation College is a NZQA Approved PTE, for delivering the Diploma in Aviation to both Domestic and International students. The College is also Pastoral Care approved and provides safe, warm and clean accommodation for those students who require it, at a very minimal rent per week.

As well as providing flight training for the Diploma in Aviation, Mainland Aviation College students can choose to extend their skills with: – Aerobatic training, Strip landings, Beach landings,

Mountain flying (which our location is perfect for), Tail wheel ratings, Instrument ratings, and more...

It is important to Mainland Management that students are provided with the best training opportunities they can get. This led to the decision of 'capping' student numbers to ensure that training is personalised with no unreasonable waiting times for Instructors, aircraft and courses. Because of this approach, our students complete their course in the required timeframe which saves them money and continues to keep the good name of Mainland Aviation College.

We have a large fleet of training aircraft and are very lucky to have a base of experienced Instructors including A-Cats, B-Cats and C-Cats which is quite a rarity in these changing times of aviation.

Our CEO, Philip Kean, has been in the aviation industry for over 50 years and is still actively flying. Instructing, Charter flying and Flight testing. His experience in all types of aircraft and flying is an asset to the college. Philip runs an open door policy to his office, where students are welcome anytime.

So, if you wish to join a Flight Training Organisation where the student comes before all else, just give us a call. We'll be happy to speak with you!



## MAINLAND AVIATION COLLEGE / MAINLAND AIR SERVICES



### Taking you from zero hours to a fully qualified Commercial Pilot with the Diploma in Aviation

- PPL • CPL • MEIR • Instructor Ratings • Tailwheel Ratings • Strip & Beach Landings • Aerobatic Ratings
- We are NZQA Approved and have Contacts in all aspects of Aviation.
- Capped student numbers ensure personalised training with no unreasonable waiting times for aircraft, instructors or courses.
- Our Flight Training covers all careers in aviation from Airlines to Ag, Scenic to Charter, and even Aussie Outback Flying, or whichever aviation career you choose.



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# Profiling Research at Massey University School of Aviation

## Part 2: Biodiesel Applications for General Aviation Engines

The continuing growth of the aviation industry shows aviation accounting for 3.5% of global energy related CO<sub>2</sub> emissions by 2030. By 2050 the industry has committed to reducing carbon emissions by 50 % from the 2005 levels.

Research into blending lower carbon Sustainable Aviation Fuels (SAF) with fossil jet fuel is gathering pace as it is recognised this will be essential to meeting this carbon emissions goal.

Dr Rose Davies at the Massey University School of Aviation is one such researcher. The research and technology development programme on biodiesel application for GA engines in New Zealand commenced in 2015 at the School of Aviation, Massey University, led by Dr Davies. She explains her particular interest in this subject:

**Biodiesel** is the popular and widely used term for fuels made by reacting vegetable oil or animal fat with an alcohol to produce long chain fatty acid esters, usually with a metal oxide or hydroxide catalyst. The biological origins of the fuel underpin a potentially sustainable resource with the intrinsic prospect of a reduced carbon footprint for users. Though there are many challenges in the production of biofuel with specifications that align with the broad requirements of fuel for aviation use, the (aviation) industry has demonstrated its interest in the potential of biodiesel with well-publicised trials by several commercial carriers.

However, there is little quantitative information on the effects of biodiesel and biodiesel blends on the performance of aviation engines - in particular on the performance of non-steady-state operations of receptacle engines which are widely used in the general aviation industry. It is strategically important to develop a biodiesel application scheme for general aviation engines, in order to assure a sustainable and renewable energy source for general aviation.

There were initially three stages in this programme: Investigating the sources/feed-stocks of biodiesel in New Zealand, conducting engine tests, and identifying the research hot spots in using biodiesel in general aviation engines.

**Stage One** - the study of the

feasibility and sustainability of biodiesels in New Zealand - analysed the history of biodiesel production, the production frameworks available at present, and the end-users.

The current main sources of feed-stock for commercially produced biodiesel in New Zealand use cooking oil and tallow, a by-product of the meat processing industry – all continuous sources. The manufacturing process for tallow biodiesel has the potential to produce high quality biodiesel.

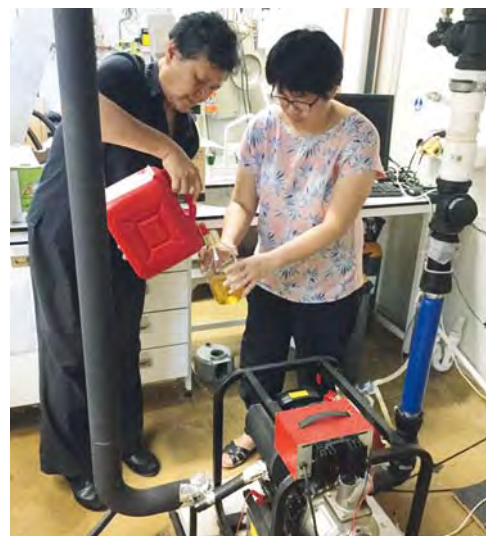
**Stage Two** saw aviation engine simulation test rigs constructed at Massey University. Pure biodiesel fuels and biodiesel/Jet A-1 blends were tested on a small jet engine and also on a diesel engine.

The jet engine was tested under steady operating conditions - equivalent to aircraft steady level flights - and under varying operating conditions, equivalent to aircraft flying in changing airspeed, heading, and rotating motions.

The diesel engine was tested under propeller operating conditions. It was found that engines can operate well on biodiesels and their blends under the steady operating conditions. However, the level of engine power and emissions is dependent on the characteristics of the biodiesel and their blends.

**Stage Three** involved testing and analysing the specifications of different biodiesels and their blends. The specifications for biodiesels can vary significantly. The ability of the tested biodiesels to produce heat/energy is comparable to that of Jet A-1 or petroleum diesel. But the specifications related to the quality of combustion and the transferability and storage, for example viscosity and flash point and cloud point, are very different. These differences in fuel specifications can cause some delays of actions in flight manoeuvres, and the low fluidity feature of biodiesel may require heat energy in fuel delivery systems.

The next step of this programme, in collaboration with Dr Hong (Linda) Yu and other international academics from the China University of Petroleum, will be to investigate the technology which can change the specification of biodiesels and their blends to bring them closer to those of Jet A-1. Several analytical methods are



Dr Rose Davies (left) working on a biodiesel test rig

in development to identify the difference in the combustion process with different biodiesel fuels when the operational conditions are not in steady state. Further systematic tests are scheduled on aircraft diesel engines to explore if any issues occur and to develop recommendations for when the fuel is switched from Jet A-1 to biodiesel or its blends.

### Post grad student enquiries welcome

Dr Davies was awarded a contract by Taylor and Francis, international academic publishers, for publication of her recently completed book. The book - 'Aerodynamics for Air Transport Pilots' (ISBN: 978-0-3673-3947-0) - is primarily aimed at bridging the gap between pilot training manuals and academic texts.

Dr Davies' other research interests include the development of motion and force feed-back for low cost PC based aviation training devices. Massey University flight instructors have been able to assist Rose in several experiments on a force feed-back model for a flight simulator.

Her subsequent joint paper on this topic with Massey's Dr Saverio Reweti was awarded the 'Best Written Paper in the Operation and Support Section' of the Australian International Aerospace Congress (AIAC) 2017 conference.

Rose is also a postgraduate supervisor interested in hearing from prospective Doctoral or Masters students sharing her research interests who wish to further their academic careers.

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# Give your passion purpose - Join the RNZAF

## What we do

The Royal New Zealand Air Force provides New Zealand with its airborne military capability. To do this, we support a fleet of aircraft – each designed to perform a different role, whether it is airlifting supplies or rescuing someone at sea. To maintain and operate our aircraft we have a tight-knit team of highly trained experts, from pilots to ground crew. Together we help protect New Zealand's interests, whilst supporting global peacekeeping and humanitarian missions.

## What you could do

All roles in the Air Force are critical to delivering effective air operations across the globe – and each role offers you the opportunity to gain industry level skills that will help you become an expert in your field. Whether you have a technical mind or enjoy working with your hands in a trade, a career in the Air Force will mean you are part of a team that is truly world-class.

Join us, and help others in times of need with agile air operations across the world.

## The lifestyle

Imagine a job where you are surrounded by the latest technology, working alongside your mates, and you have the chance to make a positive difference to the world around you. This is the unique opportunity that awaits you in the Air Force. The lifestyle is very active, very social and you will have amazing experiences, such as being involved in

peacekeeping and humanitarian missions. There are opportunities to travel overseas and you can learn a trade and gain qualifications that will set you up for life.

## Careers

There are two main career pathways in the Air Force – Commissioned Officers and Non-Commissioned Officers.

Commissioned Officer roles are offered to those with a high level of academic achievement and the potential to lead and manage.

Non-Commissioned Officer roles – aircrew, operations support and technical roles – focus on providing the essential core skills and hands-on expertise we need.

## Roles: Ground Officers

### Communication and Information Systems (CIS) Officer:

Keep us in contact at home and overseas as you train to deploy a range of advanced communication and information systems. A skilled and rewarding role.

### Engineering Officer:

The expert in all aspects of aviation maintenance, this is a role that demands the best problem solving skills and rewards you with a varied and challenging career.

### Intelligence Officer:

Military intelligence is a fascinating area of our operations and you will be at the heart of it, interpreting intelligence data on a wide range of missions at home and overseas.

### Learning Development Officer:

You will support the development of the NZ Defence Force and its people as a specialist in military training, education and professional development.

### Medical Officer:

Unlike any medical career in the civilian world and unrivalled in its variety, you will practice all aspects of medical care and train other medics and aircrew.

### Psychologist:

Finding out what makes our personnel tick is just one of the exciting challenges of this specialist role. Develop your psychology skills in the fast moving and exciting military world.

### Supply Officer:

Moving and managing military hardware, supplies and personnel requires quick thinking and the ability to keep a level head. Take the lead in this role that offers travel and challenges.



## Roles: Air Crew

### Air Warfare Officer:

Aboard the long-range surveillance P-3K2 Orion and C130H Hercules cargo aircraft, you will operate and manage complex hi-tech systems, navigate and provide tactical coordination to ensure mission success.

### Air Warfare Specialist:

On every mission aboard the specialist long-range surveillance P-3K2 Orion, you will be at the heart of its complex systems, sensors and controls.

### Flight Steward:

Travel the world on our Boeing 757 aircraft and train to become an expert in the care of crew, equipment and passengers.

### Helicopter Loadmaster:

As part of the NH90 helicopter crew you will manage all passengers and cargo, as well as operate the door guns, rescue hoist, and be the pilot's eyes for underslung loads, search, and identifying external threats.

### Parachute Jump Instructor:

There is never a dull moment in this adrenalin-packed career. Become an expert in descending safely out of aircraft and train others in the military to do the same.

### Pilot:

You will understand why this is one of the most sought after and challenging careers in the Air Force. Learn on fixed wing training aircraft and then progress to rotary wing and multiengine aircraft.

## Roles: Operations Support

### Aviation Refueller:

Become an expert in aviation fuel systems and learn to operate a range of vehicles and equipment.

### Communication and Information Systems (CIS) Technician:

Take up the challenge of mastering some of the world's most sophisticated communications technology and travel with it to destinations around the world.

### Force Protection:

Travel and adventure are all on the

agenda as you secure our elements in New Zealand and across the world. Protecting our personnel and equipment from sabotage and terror threats is a top priority.

### Fire Fighter:

Protect lives and equipment as you lead the fire and rescue services at our airfields and bases.

### Intelligence Specialist:

Test your skills locally and globally as you learn how to produce accurate intelligence from imagery, electronic signals and geospatial information.

### Logistics Specialist:

Make sure we are ready for anything by organising, buying and managing all the equipment we use in our operations at home and overseas.

### Medic:

You will be trained in a medical career unlike anything in civilian life, providing aspects of medical care to our personnel both on the ground and in the air.

## Roles: Technical

### Aircraft Systems Technician:

While some fly aircraft, other learn how they work. We will train you to become a technical master in the maintenance of all our aircraft systems.

### Aeronautical Structures Technician:

Show off your precision hand skills and train to become a specialist in repair and manufacture of metal and composite aeronautical structures and componentry.

### Electronics Technician (Aviation):

Travel the world and work on our expanding fleet of aircraft, learning how to troubleshoot and repair complex electronic systems that keep them flying.

### Ground Support Equipment (GSE) Technician:

If you are excited by working with engines, motors and specialist aviation equipment, then this is your opportunity to combine your interests.

### Safety and Surface Technician:

This will keep you busy and challenged



– it will be your responsibility to maintain a variety of equipment, from parachutes and aerial delivery equipment to painting aircraft.

### Armament Technician:

This is your opportunity to understand, handle and maintain all the Air Force's weapons, including guns, explosives and guided missiles.

## Find out more

To apply, or to find out more information on military life, entry requirements and intake information, visit the Defence Careers website:

[www.defencecareers.mil.nz](http://www.defencecareers.mil.nz)





# If you want to 'really' learn to fly...

If you want to 'really' learn to fly, and at the same time develop great skills that will support your powered flight training and all future flying, plus if you'd like to get started quite young, and fly at a very low cost, then go and visit your local gliding club. You're sure to be welcomed and have a great time there. So how can flying an aircraft without an engine teach you to better fly one that does? Jill McCaw explains:

**Engine failure landings:** This is probably the thing that everyone thinks of first when asking this question. Every landing in a glider is without an engine or the chance to go around. Glider pilots learn to land precisely where they want at the speed that is correct for the conditions – every time. Flying a glider teaches you that all aircraft fly without an engine, it's just their glide angle that is different. Landing out in a glider, i.e. landing somewhere other than on an airfield because you have lost your source of lift, happens all the time. Glider pilots train for it, right from the early days of their landing training. If a glider is at 2,000 feet then the pilot is looking for somewhere to land, looking at the paddocks below, assessing slope, wind strength and direction, obstacles and the ability to be retrieved from the paddock. If you're flying a power plane below 2,000 feet and you've flown gliders you'll automatically be making those judgements, making you safer should something go wrong. At 1,000 feet a glider pilot is preparing to land. Every landing too is a glide approach so if you have to do it in a non-powered power plane you'll be used to how it feels. You learn to judge a glide slope to aiming point and landing by angles.

**Weather awareness:** Gliders rely on the energy in the atmosphere to fly and glider pilots learn a great deal more about the weather than the average power pilot. Knowing what to expect of the air you're flying through is a safety consideration. Is that convection likely to develop into something you'd be better flying around; is the wind coming over that ridge going to try dumping you on the

ground; is this flight likely to be bumpy; and similar questions that affect your flight planning. A glider pilot would actually be using that knowledge to find the rising air and use the energy whether they're flying a glider or a power plane. This knowledge, if you're flying a powered aircraft can save you fuel, money and time.

**Stick and rudder flying:** A glider isn't pulled through the air by an engine. You have to fly it cleanly and that involves a lot more rudder than a power pilot is used to using. You learn to use your feet. A glider requires precise control movements (although they are actually very forgiving, and many training gliders will correct a bad attitude if you just leave the controls alone).

**Situational Awareness:** Glider pilots are taught to fly with their heads outside the cockpit and to always be aware of other gliders sharing their sky, particularly in thermals or flying in the rising air along ridge lines. Traveling at 100 knots along a ridge you really have to be very, very aware of other traffic, especially as it may be on a reciprocal course to you. Glider pilots judge their height above the ground by what they see out the window, their airspeed by the sound of the airflow past the aircraft in conjunction with the height of the top of the instrument panel compared to the horizon, and have an audio sound on the variometer telling them if they are in rising or falling air. They don't need their head in the cockpit.

## Where can you learn to fly a glider?

Just about anywhere in the country. See the Gliding New Zealand website for information on your local club then give them a call. Gliding clubs are run entirely by volunteers and so mostly fly weekends only. Some clubs have a booking system for trial flights but others will just expect you to turn up, put your name on the flying list and wait until a two-seater and an instructor is free. When you phone the club contact it would be worth asking what to expect as well as what the price of your flight will be. Remember that everyone, the tow pilot or winch driver, the people getting the glider onto the airstrip, the ones driving the retrieve vehicle and

your instructor are all volunteers. They're all giving something back to the sport they love. If you join the club and learn to fly, you'll be expected to pull your weight and help get other members in the air too.

## Youth Glide New Zealand

If you're 19 years of age or younger and not yet earning a wage, then you can learn to fly through Youth Glide. Youth Glide is available at most clubs and YGNZ also runs camps for young pilots of all abilities several times a year. The benefits of belonging to Youth Glide, over and above belonging to the gliding club, is the camaraderie of sharing experiences with other young pilots. Youth Glide ensures flights with 'youth compatible' instructors and extra assistance targeted specifically at young people.

## Learning to Glide

Youth Glide follows the Gliding New Zealand training curriculum. There is no early age limit to learning to fly. Many young pilots have held their Glider Pilot Licence (GPL) before their car licence. They will have had lots of practice flying with highly qualified instructors. The knowledge and skills gained while learning to fly gliders can be translated into NZQA Unit Standards for NCEA.

Once flying alone, the pilot is supervised and guided so as to make progress in a safe, structured way. Many of today's finest glider pilots started gliding at a very young age. The younger you start, within reason, the faster you learn and will have the highest likelihood of becoming a pilot able to fly further and faster and even win racing competitions. You could become a member of the New Zealand Team squad flying for your country, or perhaps, a

future champion of the world.

New Zealander John Coutts started gliding at 16 and was World Champion 10 years later. Terry Delore from Christchurch started gliding at 14 and now holds numerous world records for speed and distance.

Alex McCaw and Nick Oakley soloed at 14, and now, in their twenties compete internationally. Abbey Delore and Enya McPherson, also in their early twenties, broke a NZ women's two-seat gliding speed record for a 100km course.

## Youth Glide at Club Level

Youth Glide operations are incorporated within the parent organisation of the local gliding club or Soaring Centre. They are subject to rules and regulations of the club, and as members are entitled to free instructional training in gliders with trained instructors. Various clubs have their own arrangements, but all make at least one two-seater training glider available to Youth Glide members at no or reduced rates, and often have reduced rates for towing. Gliding New Zealand waives affiliation fees to the national body and pays the subscription of SoaringNZ, the national magazine.

Members are expected to 'do their bit' on the airfield, taking their turn at duty pilot, running wings, preparing aircraft in the morning and putting them away at the end of the day and other tasks. There is a lot of co-operation involved in running a gliding club.

The end result is that world class soaring experiences and professional training in all aspects of gliding are available to Youth Glide members at very affordable rates.

For more information see [youthglide.org.nz](http://youthglide.org.nz)

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**WAIKATO AVIATION**  
Go Beyond





Represented in New Zealand by Anderson Aviation, the Bristell NG5 can be registered in either of the microlight or LSA categories.

## Train in a Microlight or Light Sport Aircraft

As well as being CFI and Manager of the South Canterbury Aero Club, Aaron Pearce is a microlight enthusiast. Modern highly-specified microlights are no longer the poorer cousins of certified General Aviation aircraft, and depending on your end goals, microlights and light sport aircraft can provide a significantly less expensive option of learning to fly – and then continuing to do so once your licence has been printed. Aaron explains:

**When** visiting a local airfield, most people's eyes will be drawn to the shiniest, newest and fastest looking aircraft. These days, such machines are most likely to be in the Light Sport or Microlight categories.

The word microlight can still bring shivers to some of the general public thanks to the media and memories of Thrusters and Pterodactyls when every flight taken was something of a calculated risk. Thankfully, microlight technology has come a long way since then and a well-maintained microlight aircraft is now just as reliable as most Cessnas or Pipers.

As a fixed wing General Aviation Instructor and a Microlight Examiner I can only talk to my own experiences and the law surrounding these machines on the fixed wing side of things, but there are of course also plenty of rotary winged microlight types – in both the helicopter and gyroplane categories. That said, the rules are essentially the same across both types, aside from some differences in examination requirements.

When considering whether to go down the microlight or certified aircraft path for flight training, the main thing is to understand the options each path leads to, and also the law surrounding training if you're considering what you want to do with your new pilot licence or certificate.

### The differences

Between GA and microlights there are two differences we have to deal with: the machine and the training. Let's start with the machine and what you can and cannot do.

In a nutshell a microlight is a recreational machine. The aircraft are built lighter to fit in the 'microlight' category and only allowed a maximum of two seats. However there are some seriously impressive machines appearing in the microlight category, both in speed and performance, with huge wheels for back country landings and with more modern avionics than an A320 – and with minuscule operating costs. Bang for buck most modern microlights outperform their GA equivalents hands down, taking off and landing in a distance that will give a Super Cub a challenge. The lower running cost comes down to the privilege of being allowed to perform your own maintenance on the machine, and that they often consume less than 18 litres an hour of automotive grade fuel.

For all the freedom that microlighting offers, it does come with some restrictions however. As the machine is in a category allowing 'amateur maintenance', a microlight and its pilot may not fly over 'built up areas'. You can also only fly during daylight hours, and not for hire or reward.

Now regarding the pilot and the training: There are three CAA certificated Rule Part 149 organisations in New Zealand who offer microlight training and pilot certification. These are FlyingNZ (the Royal NZ Aero Club and governing body of all aero clubs), RAANZ (the Recreational Aircraft Association of NZ) and SAC (Sport Aviation Corp.). All operate under slightly different structures and all can help you to achieve your microlight pilot certificate. Do some online research and talk to members to decide which is best for you.

When considering whether to start off on the microlight or General Aviation (Cessnas and Pipers) path, it's important to think

about what you personally want to do once you have achieved your licence or certificate. Do you have aspirations of being a commercial pilot or instructor? Do you want to carry the whole family away on holiday? Or maybe you have a friend that flies and you want to become his new wingman?

It comes down to you. If you're semi-retired, only want to fly on a sunny Sunday and just want to get involved in flying but have no professional flying aspirations then definitely consider microlighting. The training is cheaper due to the lower operating costs of the aircraft, and the pathway is generally quicker with not having to undertake the same amount of training nor level of exams as for a private pilot licence. In saying that, it is a fact that a good microlight instructor will treat you and your standard of training no differently than for a fully-fledged private pilot working their way to a PPL in a Cessna.

However if you're a teenager and considering aviation as a career, save your pennies and head down the General Aviation route. Yes it is more expensive than microlighting and yes you'll fly less hours for the same money but unfortunately there is no recognition for dual hours logged in a microlight towards a PPL or later on your CPL.

You will eventually have to re-fly many of the hours you have already paid for because the instructor and aircraft weren't of the correct category. I have had to be the bearer of bad news to many a gutted teenager as they had to remove hours from their total time before a flight test because they were misinformed or just not informed about the specifics around cross-crediting their training.

### Light Sport Aircraft

The new kids on the block, LSAs or Light Sports are a completely different beast. They are basically a 'microlight', however they are

approved as being alike enough to GA aircraft and maintained as such, that the hours flown can be logged as microlight or GA depending on the instructor's qualification, or the certificate or licence held by the pilot.

Basically any pilot or certificate holder can fly the machine on his or her licence or certificate. If the instructor is operating on a microlight certificate then the hours are 'microlight' but if the instructor is a C, B, or A-Cat and has an appropriate type rating then the hours are now GA hours and count towards PPL, CPL and even Instructor ratings.


### What to do

The best advice I can offer is talk to people, pilots, students, and instructors before you spend any money on flight training with anyone. Remember, there could be some bias and most people will be trying to sell you their machine / instruction / preference with the motive of attracting your business and hard-earned money.

A good instructor or club should be spending more time asking you questions than telling you how great or how cheap they are – and they will also be up front about what you can or cannot do with the licence or certificate you might gain with them.

Microlights are cheap to operate, happy, recreational and generally speaking, fair weather machines.

That statement might ruffle some elevators and rudders but it's not meant in any derogatory way; as a recreational, private owner machine it's very hard to beat the new Tecnam tailwheel for versatile fun, a Dynamic for looks and speed, or the affordable happiness of a Rans S6. Whichever path you choose, you're sure to have a great many enjoyable hours of flying ahead.

Aaron Pearce 



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# Study Support from Waypoints Aviation

## Pilot Books - Ground Courses - Mock Exams - iBooks

**Owned** and managed by Mark and Ruth Woodhouse, Waypoints Aviation provides a comprehensive range of study support material for student pilots working through their licence examination credits. Mark is an experienced ATPL ground instructor, currently employed as an international pilot with Air New Zealand.

Resources offered by Waypoints include the PilotBooks series of flight and ground training textbooks, Apple eBooks, online Mock (practice) Exams, Ground Courses. The majority of this material development has been led by Mark himself, who is continuing to extend the range as opportunity permits.

### PilotBooks and eBooks

The well-known and respected PilotBooks series of flight and ground training textbooks for the PPL, CPL, IR, BTK and ATPL have been authored by Walter Wagtendonk, Stewart Boys and

Mark Woodhouse. These books have become the de facto purchase for most new student pilots starting their careers and many will be pleased to hear that Waypoints are presently also developing more volumes in the series.

Waypoints are continuing to work on a project to convert the PilotBooks range of conventional paper textbooks to eBooks. To date fourteen of the textbooks have been converted, i.e., the Flight Training Manual and Volumes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13 and 14 can be purchased through the Apple iBookstore. See [www.waypoints.co.nz](http://www.waypoints.co.nz) for details. [KiwiFlyer has sampled these on an iPad. They are easy to use, very elegantly presented, well-illustrated, and include interactive question and answer sessions for each chapter, as well as links to Waypoints mock exams. Considering these are textbooks, they have a great deal of visual appeal - the layout, fonts,

and use of imagery is very good. Tools to view the different layers in each book (chapters, sections, questions, etc.) are all user-friendly. Text is searchable, and you can add highlights and notes to it for your own reference. It's also of course much more portable than a textbook and easy to refer to whenever the opportunity permits. If you're an iPad using aviation student, this is probably a study option that's perfect for you. And if you haven't got an iPad it's potentially enough justification to buy one.]

### Online Mock Exams

Waypoints Mock Exams are multi-choice practice exams, styled on the real ASPEQ examination (similar to the old Sample Exam papers they used to make available). Question bank sets are available now for all of the PPL(A) and (H) subjects, for CPL Air Law, Nav and for Poff, for BTK, and for five of the

seven ATPL(A) subjects. More mock exam question banks are under development, with priority going on the CPL(A) and ATPL(A) subjects.

Each mock exam you sit is unique, made up of a set number of multi-choice questions generated randomly from a large master question bank, covering the full syllabus of each subject. All content is modelled on the type of questions you may get in the real ASPEQ examinations.

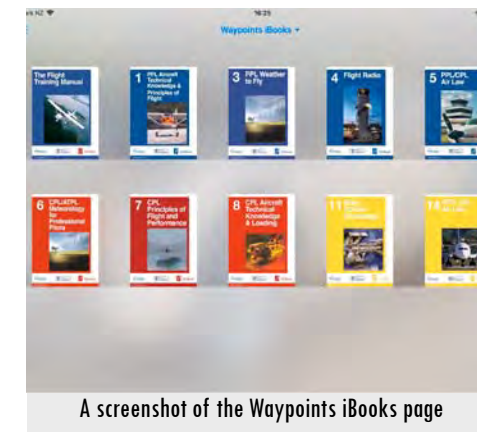
These mock exams are designed to fine tune and focus your knowledge in preparation for the real examination. Each multi-choice item comes with a syllabus reference and a study reference.

### Ground Courses

Waypoints provide ground courses for the higher level professional licences and ratings. ATPL theory, and BTK ground courses are run in conjunction with and based at the Nelson Aviation College in Motueka. Waypoints works very closely with the College.

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developed and offer pilot study support material which will help you develop appropriate knowledge, skills and attitudes to achieve your flying dreams - safely. We offer material to you as free downloads, as they become available. Material on our Free Stuff page is offered as a free download. Its content has been produced and collated from a wide range of sources and where possible we have given full credit to the original author(s).

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## ZK-ITN Bell 206B



ZK-ITN joined the fleet at Lister Helicopters at the start of September after a complete refurbish of the interior, new exterior paint and colour scheme, and an avionics refit. The ex-Aero Asahi Bell Jet Ranger 206B was purchased offshore in June and delivered to Flightline North Shore where it acquired a CoA before being flown to Dunedin for refurbishment. ITN will complement Lister Helicopter's current fleet of two MD500Es and an AS350B3E. Primarily intended for agricultural spreading and spraying work it will also be used for pilot training and air transport operations.

Lister Helicopters are located in Milton, Otago. The company was formed by Alister and Nadine Lister in June 2011 with a desire to provide professional and quality services in their local area. In 2013 they expanded with the purchase of another MD500E. Growth continued and in 2015 they increased capacity again with the purchase of an AS350FX2 providing for more efficiency on bigger jobs. The company is AIRCARE and SpreadMark Accredited with comprehensive Environment and Safety Management Systems.

Originally developed as the Bell YOH-4 for the United States Army's Light Observation Helicopter program, the aircraft was not selected by the Army. Bell redesigned the airframe and (very) successfully marketed the helicopter commercially as the five-place Bell 206A Jet Ranger. Various upgrades followed over the years and more recently a new generation of the series has been developed as the Bell 505 Jet Ranger X.

## ZK-DUX Zenair CH701 STOL



To be part of a group that flies off into the mountains and lands in riverbeds to go hunting and fishing is the ultimate recreation for Gordon Moloney and thus he purchased a STOL Zenair CH701 from Brisbane, Australia. But when the plane arrived into Stu Bufton's hangar they discovered the plane had been put together very badly. Stu handed Gordon the tools with the words "take the fuse apart from the seat back!"

During the rebuild Gordon set about finding a replacement Rotax engine, settling on a late model 100hp version out of the States. Having paid for the engine Gordon discovered it was a scam! Buyers beware. This meant the engine search was

on again with an engine subsequently being acquired from a local flight training school.

Once the fuselage was completed, Stu and Gordon turned their attention to the wings only to discover the spar had been over-drilled. The cost-effective option was to buy new wings however in a continuation of their misfortune, they arrived with forklift damage to some panels. While this repair was being done Gordon took the opportunity to install two extra fuel tanks in the wings.

They made many modifications during the rebuild, from strengthening the nose wheel and horizontal stabiliser brackets to installing four new fuel tanks which now give the capacity to carry 155 litres. At 15 litres per hour that's 10 hours flight time. Also fitted were new strobe lights, a new carbon fibre cowling, a Bolly propeller, plus they changed the main gear to 26" bush tyres. There were other custom touches too; the instrument panel is finished in Mazda 2 green with a black acid wash and includes a Garmin 692 along with steam gauges and comms. The plane is finished with a striking colour scheme of Mazda green, silver and black. Painted on the tail is a Mallard duck coming in to land. After all the improvements the completed 701 came out at 300 kgs empty weight.

Gordon said all through this process Stu was a fountain of knowledge, the standard phrase becoming "ask Stu he'll know the answer" but for Stu, he just wanted the plane out of his hangar. There's some irony there as Gordon's work requires him to transfer to Auckland -

## ARRIVALS - July / August 2019

CAZ Vans RV-6  
CUA Light Miniature LM-3X-W  
DKL Just Aircraft SuperSTOL  
DSY Embraer EMB-820C  
DUX Zenair CH701 STOL  
DWZ Pipistrel Virus SW  
EPL Pacific Aerospace 750XL  
FXJ Boeing 737-36E  
GFS Sportline Aviacija LAK-17B FES  
HCA Eurocopter EC 120 B  
HDR MBB MBB-BK117 B-2  
HGR Eurocopter AS 350 B3  
HUY Ultraspot 555T  
HKQ Eurocopter AS 350 B2  
HLD Canadian Home Rotors Safari  
HPC Bell 206L3  
HWJ Guimbal Cabri G2  
HXC Eurocopter EC 120 B  
HZI Robinson R44 II  
HZY Hughes 369D  
IDH Airbus MBB-BK117 D-2  
IDK Eurocopter AS 350 BA  
IEV Eurocopter AS 350 BA  
IGI Airbus MBB-BK117 D-2  
ILP Eurocopter AS 350 B2  
ITN Bell 206B  
JCG Cessna 170B  
LAM Piper PA-18-150  
LBK Vans RV-14  
LKL Aeropro EuroFox 3K  
MBN Tecnam P2008 JC  
MVZ ATR-GIE ATR 72-12A  
MWM Piper PA-28-181  
NIN Airbus A321-271NX  
RDP AutoGyro Cavalon  
RGC Tecnam P92 Echo UL  
RMR Pitts S-1 Special  
SIL Alpi Aviation Pioneer 300  
SLA Cessna 208B  
SRP Zenith Zodiac CH 601-HD  
SXP Air Tractor AT-502A  
TLO Cessna 185F  
TLT Tecnam P2008 JC  
VME Beechcraft B300  
VNZ Vans RV-6

## TRANSFERS - July / August 2019

AST Tecnam Astore  
AVH Auster Mk 5  
BSP Cessna 180  
CAA Cessna 172S  
CFA Grumman G-44A  
CZH Taylor Monoplane U/L  
DCU Fantasy Air Allegro 2000  
DFB Piper PA-28-235  
DYA Aerospool Dynamic WT9  
EFD Cessna 150J  
ETZ Cessna 152  
EZY Cli-mate Cli-mate 100  
FSL Cessna A152  
GGO Schleicher ASW 15  
GHD Schempp-Hirth Standard Cirrus  
GQT Schempp-Hirth Ventus 2b  
HBT Eurocopter AS 350 B2  
HCO Robinson R44 II  
HHK Eurocopter AS 350 B2  
HIH Eurocopter AS 350 BA  
HIZ Hughes 269C  
HKQ Eurocopter AS 350 B2  
HLM Robinson R44 II  
HLO Robinson R44  
HOD Bell 206B  
HQN Eurocopter AS 350 B2  
HSJ Guimbal Cabri G2  
HTN MDHI 369E  
HUV Robinson R22 Beta  
HYM Eurocopter AS 350 B2  
IAY Robinson R44  
ICK Aerospatiale AS 355 F1  
ICK Aerospatiale AS 355 F1  
IDU Aerospatiale AS 355 F1  
IKU Robinson R44  
IPE Eurocopter AS 350 B2  
IRE Eurocopter AS 350 BA  
ITY Eurocopter AS 350 B3  
JAR Micro Aviation B22 Bantam  
JAT Pipistrel Alpha Trainer  
JCV Cessna U206G  
JON Jodel D.11  
KBN Pacific Aerospace 750XL  
KMH Cessna TU206G  
MBC Piper PA-28-161  
MUM Cessna A152  
NAC Cessna 172RG  
OSO Zenair CH701 SP  
OUR Rans S-6ES Coyote II  
REM Remos G3NZ  
RVO Vans RV-4  
TCG AutoGyro Europe MT03 Eagle

Continued on next page...

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and his plane is going to remain in Stu's hanger.

ZK-DUX (Ducks!) first flew last week and even though Gordon says it is the most expensive 701 in the world, it was fantastic to finally have it airborne. Congratulations are certainly due!

### ZK-CUA Light Miniature LM-3X-W



It had always been Jeff Mill's goal to build an aeroplane from scratch and now he has accomplished this, with the completion of his Light Miniature plane.

The Light Miniature Aircraft LM-1, LM-2 and LM-3 are a family of American high wing, single seat, strut-braced ultralight aircraft that were scale reproductions of famous general aviation aircraft. Designed by Fred McCullan, the plans were all available from Light Miniature Aircraft of Okeechobee, Florida. Jeff's LM-3X-W is a 75% scale replica of an Aeronca Champ.

Jeff's love of this design started in the '70s when for about 10 years he owned and flew ZK-EHU - a metal Light Miniature. However then having shifted to the UK he found it too expensive to have your own plane, so instead built and flew models. By the time he returned to New Zealand, Fred had designed a wooden version of the Light Miniature so with the encouragement of Jack Mehlhopt, Jeff ordered a set of plans and got to work building his own plane.

The LM (Light Miniature or as Jeff calls it Large Model) is constructed completely of Douglas Fir and marine ply which was glued together using West epoxy resin, then the total wooden structure was varnished with an epoxy varnish to protect it and lengthen the life of the wood. The plane is covered with Ceconite fabric with coats of nitrate dope being applied followed by coats of butyrate dope with colour, creating a smart maroon and silver finished aeroplane. For power Jeff tried to convert a motorcycle engine but in the end, this didn't work out - so has installed a Rotax

#### ...continued from previous page

WAA Piper PA-38-112	Marlborough Aero Club (Inc)	Blenheim	Aeroplane
WMH Foxcon Aviation Terrier 200	Mr R B Sladen	Christchurch	Microlight Class 2
WUE Cessna 172R	NZICPA	Whanganui	Aeroplane
YES Beech 76	Foxbat New Zealand Limited	Pokero	Aeroplane
<b>DEPARTURES - July / August 2019</b>			
HFV Robinson R44 II	Heliworx Aotearoa Limited	Dannevirke	Helicopter
HQZ Kawasaki BK117 C-1	Oceania Aviation Limited	Papakura	Helicopter
HRT Robinson R22 Beta	Mr D T Collins	Taupo	Helicopter
HSG Bell 206B	Anderson Helicopters Limited	Hokitika	Helicopter
HZI Robinson R44 II	Heliflite Limited	Papakura	Helicopter
IAB Eurocopter AS 350 BA	Volcanic Air Safaris Limited	Rotorua	Helicopter
IAM Robinson R44	Hawkeye Helicopters Limited	Winton	Helicopter
IBE Robinson R44 II	Heliworx Aotearoa Limited	Dannevirke	Helicopter
IEU Eurocopter AS 350 BA	Airwork (NZ) Limited	Papakura	Helicopter
IPZ Robinson R44 II	SCN Helicopters Limited	Porirua	Helicopter
KEH Pacific Aerospace 750XL	Pacific Aerospace Limited	Hamilton	Aeroplane
KEI Pacific Aerospace 750XL	Pacific Aerospace Limited	Hamilton	Aeroplane
KEK Pacific Aerospace 750XL	Pacific Aerospace Limited	Hamilton	Aeroplane
KFH Convaair 340/580	Air Chathams Limited	Chatham Islands	Aeroplane
OJC Airbus A320-232	Air New Zealand Ltd	New Plymouth	Aeroplane
TAM Cessna 421C	Skywest Aviation Ltd	Auckland	Aeroplane
WAK Tecnam P2002JF UL	Wairarapa & Ruahine Aero Club	Masterion	Microlight Class 2

912 instead. For the initial stages of ground running Jeff borrowed a wooden propeller off a friend to do the job but has now ordered a ground adjustable Bolly Propeller from Australia. Once the propeller arrives and the plane is inspected it will be ready for flight. Jeff's registration choice of ZK-CUA matches the registration of the plane Jeff first soloed in in 1974.

### ZK-VNZ Vans RV-6



After looking at a few different designs, Ian Chapman of Manukau decided that the appeal of side-by-side seating and a well-respected manufacturer meant that the RV-6 was the plane for him. So back in the '90s he purchased the first of the component kits - the tail which was later followed by the wing, fuse and lastly the finishing kit.

Van's Aircraft designer, Richard VanGrunsven, designed the RV-6 series as a development of the RV-4, which was itself a development of the single seat RV-3. The RV-6 was the first aircraft in the popular Van's RV series to feature side-by-side seating and was first flown in 1985. Over 2500 kits have since been completed.

Ian's RV-6 is of all metal construction which he says was the part of the build that he enjoyed the most. He also enjoyed learning different skills with the installation of the electrical systems and

the instrument panel. Ian has kept the instrument panel straight forward with the use of all-round dials but also with a Garmin G5. Powered with a 160 hp O-320 Lycoming turning a Sensenich propeller, his RV6 should cruise along nicely at 150 kts. Ian painted his RV-6 using 2 pot Imron Dupont paint - in a spray tent that he built in his backyard resulting in a striking red and white colour scheme.

At time of writing VNZ has been signed off by Ian's engineer Kevin Paulsen and is now awaiting a CAA inspection, then it will be ready for the test flight either by Kevin or David Wilkinson.

*If you have recently registered a new aircraft on the NZ register and would like to see a profile of it on these pages, send a message to Penny by email: e.p.belworthy@xtra.co.nz*



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Contact Damien Dew at Heliwest  
on +61 (0)407 581 475 or damiendew@heliwest.com.au

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This is a complete ground-up restoration with new fabric, new undercarriage legs, new wing bolts and link plates, tailplane brackets, 12.5 gallon metal fuel tanks, new windscreens and side windows, and comes with some engine spares and tooling. The engine is a Walter Lom, 140hp having only done 37 hours since new, driving a MT electric constant speed propeller. This is a very smooth running engine with none of the normal Gipsy oil leaks, and cruises at 95-100 knots using 28 lph. Total airframe time 12,883 hours, certified in exhibition category.

### DHC-1 Chipmunk Mk22a

ZK-LOM ex RAF 745 ex G-AOGS

Articles on the history and restoration of this aircraft appear in Kiwi Flyer issues 60 and 61 ([download at kiwiflyer.co.nz](http://kiwiflyer.co.nz)).

Inquires regarding setting up a syndicate for this aircraft would be welcome and hangarage could be available at West Melton airfield required.

Offers. Contact Jim  
03 741 1278 or 029 233 9914



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**Classified deadline**  
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A high-angle, aerial photograph of a white Diamond aircraft with blue accents, registration G12, on a runway. The aircraft is positioned diagonally across the frame, with its wings spread wide. The runway has white and yellow markings, and the surrounding area is green grass. The Hawker Pacific logo is in the top left corner.

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