

# The KiwiFlyer Guide to Aviation Training

October 2019 Supplement



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Where to complete your flight training

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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



Training in Ardmore Flying School's Airbus A320 Simulator.



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.



# HELPING YOUR CAREER TAKE OFF

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out more



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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 Certified 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



You'll learn to fly in a state of the art training helicopter - the Guimbal Cabri G2.



It's just a short flight to the Southern Alps for genuine 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 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)

[www.christchurchhelicopters.co.nz](http://www.christchurchhelicopters.co.nz)



Bucket training in our nearby low flying area.

**2020 Diploma in Aviation applications now open!**

Student Loans & Allowances Available

THIS COULD BE YOU...

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Contact Kevin for more information

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





# learn2fly

REPRESENTING AERO CLUBS THROUGHOUT NEW ZEALAND



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](http://www.flyingnz.co.nz)



[execsec@flyingnz.co.nz](mailto: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](http://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 bach 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 Victa 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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09 299 9442 [sylvia@heliflite.nz](mailto:sylvia@heliflite.nz) [www.heliflite.co.nz](http://www.heliflite.co.nz)



# 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.

## SOUTHERN WINGS



# Take off

on a Commercial Pilots Career with a preferred training provider for the Air New Zealand Institute



Southern Wings - recognised by one of the worlds best airlines

**Bases in Auckland and Invercargill**

**"STUDENT LOAN FUNDING AVAILABLE"**



For more information  
E: [info@southernwings.co.nz](mailto:info@southernwings.co.nz)

P: 0800 284 283 or 03 218 6171  
W: [www.southernwings.co.nz](http://www.southernwings.co.nz)



# 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.http://cadetforces.mil.nz/about/air-training-corps.htm](http://www.http://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.**



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Tail Wheel Ratings  
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PPL - CPL - BFRs

Regular club activities  
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Very experienced B-Cat  
MEIR Commercial  
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**Wanganui Aero Club**

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WanganuiAeroClub.co.nz

or look us up on Facebook

## 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 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.



## DREAM OF BECOMING A HELICOPTER PILOT?

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Diploma in Aviation  
Private Training PPL, CPL  
Advanced Mountain Flying  
Specialist Training

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- NZ's most productive helicopter flight school
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- Eight highly experienced flight instructors
- Mountain flying experience is 2 minutes in any direction
- Train in an operating commercial environment
- Ground instruction and industry links to boost graduate employability

*You're one of a kind and so are we, so why go anywhere else?*

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[training@wanakahelicopters.co.nz](mailto:training@wanakahelicopters.co.nz)  
[www.wanakahelicopters.co.nz](http://www.wanakahelicopters.co.nz)





# 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 Savern 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.

# AVIATION CONNECTS PEOPLE WITH OPPORTUNITIES



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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:

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## 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 Courtts 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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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 miniscule 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), RANZ (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.

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# Study Support from Waypoints Aviation

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

**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.]

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

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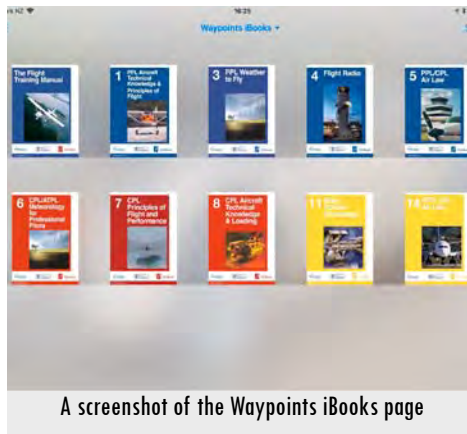
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