Tactical Flying by Moonlight
Joint Amphibious Exercise

Providing Election Support in the Solomons

Tactical Training

New Heights in Aeromedical Exercise

New Graduates Celebrate

Future Looking Air Force

Celebrating Success

Nanogirl’s Air Force Honour

Checking out our Parachute Kit

Air Power

Opportunity Knocked for Airman

Why Do We?

First Word

Our Heritage/Our Future

#FacesOfYourForce

Notices/Quiz

Photo of the Month

Our mission
The RNZAF will provide New Zealand with relevant, responsive and effective Air Power to meet its security interests. Air Force News is the official magazine of the Royal New Zealand Air Force (RNZAF)—established to inform, educate and entertain its personnel and friends.

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• photos provided separate from the text – at least 300dpi.

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New Zealand Government
The tragedy in Christchurch on the 15th of March has been rightly described as a nation-defining event. Like the rest of the Nation, the RNZAF community has been impacted in many ways, both at personal and professional levels. The NZDF responded immediately to this tragedy and the RNZAF’s immediate and continuing contribution has been unassuming but impressive.

This article is actually a rewrite of my original First Word – so the Second Word (and my last word!). The intent of this article was to discuss ‘The Strategic Defence Policy Statement 2018’ which sets out the Government’s policy objectives for the New Zealand Defence Force. This Statement was released early in the new Government’s term and sets out the framework of principles and expectations for the NZDF.

One of the key themes was recognising the NZDF’s contribution in a wider context than just pure military outcomes. Reference to ‘overall wellbeing’ and ‘resilience of New Zealand’ provides an additional lens and focus to our contribution to New Zealand.

Community, Nation and World is the framing statement introduced in the policy. This is a nice fit to the service the RNZAF has traditionally provided but also a challenge and focus for our future outputs.

As I reflect on this theme, the service the RNZAF has provided to New Zealand over the last few weeks to support agencies through the Christchurch tragedy is an exemplar on supporting the community, nation and world and contributing to our great nation’s wellbeing and resilience.

In the 48 hours after 15 March, the RNZAF transported 332 passengers and significant freight in B757, C-130 and KA350 flights to Christchurch.

All of the RNZAF’s national readiness times were met, in most cases aircraft were ready to move well within the requirement and there were multiple aircraft of each type made available. Even aircraft that do not have a formal national contingency requirement like the KA350, were made available within 60 minutes and were gratefully utilised.

The ability to provide this excellent level of support can be attributable to you all; in your individual and collective capacities whether flying, directly supporting operations or enabling these critical missions. There were many other activities that required NZDF support which have been provided without fanfare but with urgency and professionalism.

Our contribution has also been on a personal level. One of our number, WGCDFr Faaryaz Ali who is CO Maintenance Wing, has been deeply affected by the horrific attack on the Muslim Community in Christchurch. Faaryaz is a committed Muslim and was in Christchurch for the week after the tragedy supporting the community.

He is a great example of how we can contribute as members of the NZDF and the wider community to the wellbeing of New Zealand.

In Faaryaz’s own words:

‘I’m wearing my long sleeve blues for the funeral services, as due to the nature of the services being held, SD’s are not practical for praying in the dirt. I’m keen to show the community they have NZDF support, but another major reason I chose to wear my uniform is that in a small way it hopefully contributes to confidence in their security, seeing some in their prayer ranks in uniform. I now appreciate the Air Force badge on the sleeves...almost everyone has been able to identify me as Air Force’.

As I conclude my service as the Deputy Chief, it is statements like that and the service we provide to our community, nation and world, in all its forms and an on-going basis that makes me immensely proud of being a member of the RNZAF and NZDF.
Tri-Service Amphibious Training “a balancing act”

Various deployment methods were used with the support of the Royal New Zealand Air Force, Royal New Zealand Navy and New Zealand Army.

NZDF platforms included two C-130 Hercules, an NH90 helicopter and the RNZN’s strategic sealift ship HMNZS Canterbury.

An NZSOF officer, who we cannot name for security reasons said it was an exercise in interoperability.

“It required detailed planning and control in its execution in order to coordinate the various assets to deliver troops to precise locations on precise timings and operate as a single task force, ensuring soldiers could flow seamlessly between the land, sea and air.”

The exercise started with two C-130 Hercules disembarking boats and soldiers simultaneously via parachute into the sea, whose crew then prepared their boats to navigate across the sea to marry up with and embark on HMNZS Canterbury.

Air Force Movements Operator Corporal Mike Dunstan said it was a “balancing act” to ensure the boats and equipment were set up correctly and weighted just right so they would fly correctly underneath their parachutes. The force then boarded the NH90 helicopter and flew from Canterbury in order to conduct “Helocast Drills” (jumping from helicopters) into the sea. They were then picked up by rigid hull inflatable boat and carried on with their task.

The exercise concluded with NH90s flying low toward Canterbury, to deploy assault teams by fast-roping onto the ship while underway.

Ship Amphibious Load Team Warrant Officer Class 2 Tony Adams said everyone had to be on point as an endless stream of flights and various craft and their crews were moving to and from the ship at what seemed to be the same time.

“However, our training and processes proved to be sound. We were moving people safely and without delay.”
“Had the load failed the soldiers would have been stranded in the middle of the sea, resulting in mission failure.”

- Corporal Mike Dunstan
Two NH90 helicopters and more than 50 NZDF personnel have been transporting election officials, police and voting material to several remote communities in Solomon Islands in support of the country’s general election.

The aircraft and personnel were flown to the Solomon Islands’ capital, Honiara, on a Royal Australian Air Force C-17 Globemaster aircraft, as part of a combined operation with Australia, in response to a request from the Solomon Islands Electoral Commission.

The general election, that took place earlier this month was the first since the Regional Assistance Mission to Solomon Islands concluded in 2017.

RNZAF Squadron Leader Michael Adair said two NH90 helicopters had been providing back-up transport support as part of a Combined Task Group led by the Australian Defence Force.

Since arriving in Honiara in mid-March, the helicopters had flown election officials to several remote communities, Squadron Leader Adair said. These included Taro Island, which is 500km northwest of the capital Honiara, Gizo, the second-largest town in Solomon Islands, about 380km northwest of Honiara, and Munda, a town on the island of Munda, 320km northwest of the capital.

“Together with the Australian Defence Force’s MRH90 helicopters, we have been flying to outlying islands to transport election officials, ballot boxes and other election material.

“By providing this support we are helping authorities ensure voting material is delivered across the country before Election Day.”

Acting Commander Joint Forces New Zealand Brigadier Jim Bliss said the operation also supported the New Zealand Government’s goal of deepening defence engagement with our Pacific neighbours.

The combined New Zealand-Australian operation helped transport officials and election materials to about 1200 polling stations spread across six main islands and a number of the 900 smaller islands that comprise the Solomon Islands.

“Helicopter transport capability is critical because the polling stations are spread out across an archipelago,” Brigadier Bliss said.

In January the NZDF, via a C-130 Hercules, delivered about two tonnes of voting equipment provided by the Ministry of Foreign Affairs and Trade to the Solomon Islands Electoral Commission. The New Zealand Government has announced that it would also send election observers.
“The NH90 is ideally suited to provide logistic support because of their ability to land in remote locations and fly for 2.8 hours without refuelling,”

— Squadron Leader Michael Adair
Flying and landing a C-130 Hercules in blackout conditions either in the battlefield or on a runway damaged by a natural disaster is just one of the scenarios No. 40 Squadron crews have been recently training for.
The more light there is, the better the magnification works, so on a clear night, with a full moon and starlight, it’s almost like us standing in daylight. The problem is that the brighter it is, the easier it is to see normally. When there is very little light there is a degraded optical picture – so it’s finding a balance between the two.

Safety and Surface personnel ensure the equipment is stored safely and correctly. Because of the security aspect of the NVG equipment, they are kept in a locked case, in a locked room.

Last year Hercules crew took NVG equipment to Tonga after it was hit by Tropical Cyclone Gita and the status of the airfield lights was unknown.

Working out of Woodbourne provided the crew with a number of challenges, including more planning opportunities because they were flying in an unfamiliar environment, FLTLT Brown said.

“The mountains and the terrain provide a more complicated environment for the crew members – they need to contend with more wind, more updrafts and downdrafts, clouds that are socking around the hills – it just increases the difficulty of the task for us.”

Air Warfare Officer (AWO) Flight Lieutenant Adam Palmer’s main focus was around the “Calculated Release Point” for loads dropped out the back of the plane.

“Anything that comes out of the aircraft is pretty much the responsibility of the AWO. I’ll take into account the load weight, the height, the speed and figure out the most accurate position to release it from the aircraft so it lands in the desired position.”

The weight of the load dictates the size of parachute to use as they have different rates of fall, he said.

Airdrops are capability the Air Force has used many times, the most recent in New Zealand was after the Kaikoura earthquake, when a Hercules was required to drop loads of water to residents because the roads were impassable.

“In a wartime scenario it’s about being able to resupply troops on the ground,” FLTLT Palmer said.

Loadmaster Flight Sergeant (F/S) Dave Cresswell said airdrops had also been used for mail, construction equipment and stores for remote areas including Raoul and Chatham Islands.
“Our training has to be at the highest end, so when we get tasked to do these kinds of things, we are as effective as possible.”

Loads can be nearly 10m in length and can weigh up to nearly 20,000kg.

Putting the loads together were personnel from 5 Movements Company. They worked alongside Air Force logistics staff during the exercise.

Leading Aircraftman Hayley Hutana said the role involved “marshalling, loading and unloading once the aircraft has landed”. “It’s a vital part of ground safety.”

“The scenery and terrain is awesome for the crews – we can tick off mountain flying techniques and low level flying techniques are easier to achieve down here compared to Auckland.”

- Flight Lieutenant Alastair Brown
The day-long Night Vision Goggle Ground Training course is run by Baz Belzile, who said the point of the training is to give aircrew a basic NVG understanding prior to starting the night phase of flight training. The students also receive practical training in AMU’s Virtual Terrain Image Generation System that ensures students are taken “from the known to the unknown” in a controlled environment.

“We not only teach the advantages, but also the limitation of NVGs. People think they see everything - there’s initially a wow factor when people put them on, but then they learn very quickly there are limits to them.”

Those limitations include reduced visual acuity, reduced field of view from about 180 degrees to 40 degrees and a lack of depth perception.

“Most of us see reds, greens and blues and a combination of those colours make up the other colours that we see. The NVGs work inside the visual field of the electromagnetic spectrum but also into the infra-red, which is invisible.”

Depth perception can also be challenging, but is a skill users are able to acquire with time, Mr Belzile said.

“With NVGs, people use monocular vision, rather than binocular vision.”

Much of the training is based on previous incidents or accidents, Mr Belzile said. “It’s unfortunate, but you do take a lot from lessons learned.”

The aircrew learn about detecting different types of weather, which may not be easily detected through the goggles. They are taught how to look outside the goggles, which Mr Belzile calls “composite scan”.

“They’ll pick up heavy rain and thick clouds, but when you get into mist, light fog and thin clouds, the aircrew might be well in to it before they pick up they are in bad weather. So we teach the helicopter loadmasters to alert the pilots if they see that type of weather ahead and that prompts the pilots to look outside their NVGs.”

Goggles need energy to work – if there is no light source, they don’t work, he said.

“Your best light source out there at night is obviously the moon and stars.”
Fuel – Anytime, Anywhere

From war zones to nations devastated by a natural disaster, the Air Force ensures it can always get its hands on fuel with its Deployable Bulk Fuel Installation (DBFI) unit.

The capability means the Defence Force can deploy fuel to any area that does not have that type of infrastructure support. This makes it a perfect fit for use in the tactical flying exercise as the teams are specifically training for those environments.

“In a Pacific Island that had been damaged by a natural disaster or somewhere where fuel stock had been compromised, we have the ability to set this up and get our flying operations up as soon as possible,” aviation refueller Sergeant (SGT) Mike Holmden said.

The unit was set up at Base Woodbourne for the duration of the tactical flying exercise.

The rubber tanks work in any environment – from the heat of the Middle East to the frigid temperatures in Antarctica.

The tanks have been in use by the Air Force since the 1980s and the NZ Army has a similar set-up for diesel. It has been deployed in Bougainville, Solomon Islands, Timor-Leste and exercises in Fiji.

The current iteration came out of Southern Katipo 15 when the team aligned the equipment with the latest industry standards, SGT Holmden said.

A lot of effort has gone into ensuring the structure is as environmentally sound as well as being as safe as practically possible.

“Because fuel is hazardous to plant and animal life, we try to contain as much as possible. The tanks are in their own self-contained bunds. So if the tanks gave up and let go, all that fuel would be contained and would not leak into the environment. The drip trays at each joint outside has its own secondary containment, so if there are any minor leaks the drip tray can capture them.”

The fuel that was being used for the exercise had been trucked out of Lyttelton, SGT Holmden said.

“If we were overseas, we would try to source the fuel from local operators, which in turn puts money back into their economy. But we can download fuel out of the Hercules if we really needed to.”

**BY THE NUMBERS:**

- **1,500** Litres / minute flow rate
- **124,000** Litre capacity
- **12** Pallets on an aircraft or five truck loads to transport
- **8** Hours for a 10 man team to have it operational

Fuel – Anytime, Anywhere
New Heights Reached in Aeromedical Exercise

The Air Force has successfully simulated evacuating injured patients to help develop its helicopter aeromedical evacuation capability.

Two training flights involving a specialist trained medical team consisting of a nurse, a doctor and three medics were held recently as part of Exercise Starlight Ligatures. During the event, six personnel role-playing as casualties were transported in an NH90 helicopter.

“The exercise is part of a number of activities to maintain currency and prepare the team,” said Major (MAJ) Dave Greenhough, the Interim Rotary Wing Aeromedical Evacuation Lead.

The NH90 used for the exercise was reconfigured to function as an air ambulance, equipped with essential medical equipment and supplies, he said. Once airborne, the patients’ vital signs were monitored and patient care continued throughout the 15-minute flight from RNZAF Base Ohakea to Languards Bluff in Whanganui.

“When training for aeromedical evacuations of patients by helicopter, we evaluate a number of aspects such as teamwork, communication and coordination among the team, while ensuring the safety and continuity of care of patients,” MAJ Greenhough said.

Joint Support Component Commander Group Captain Peter Franken said although the NZDF did not have a dedicated air ambulance, it had been developing an aeromedical evacuation capability using NH90s.

“It will also enhance our Defence Force’s response to humanitarian assistance and disaster relief emergencies.”

Lieutenant Dan Hirst said as part of the exercise, eight Force Health Protection staff had also been working with the local Public Health Unit to practise their skills in assessing drinking water quality, soil quality, waste management, sanitation and food safety.
“When we deploy on operations or exercises in New Zealand or overseas, we ensure that environmental health threats are dealt with so that our personnel remain healthy to achieve their mission,” he said.

Appropriate training teaches aeromedical evacuation teams how to work well under pressure, realistic scenarios bring out the best in the individual and team. These conditions must be trained and prepared for, which is only achieved with real flying time.

These training flights are a simulated high level of care for an increasing dependency up to the transport of a mechanically ventilated patient from the R2.

Officer in Charge of the Aviation Medicine Unit Gus Cabre said mistakes could be easily made during complicated situations.

“Realistic simulation replicates the challenging environment and the difficulties aeromedical evacuation teams face.

“Working in the actual environment with the individuals and equipment you would really use prepares our people. However our health clinicians also need to encounter these problems for real.”

Historically the Air Force has played a pivotal role in aeromedical evacuation both domestically and abroad. In 1922 George Bolt flew surgeon Carrick Robertson to an urgent call in the Waikato. In the 1940s Douglas Dakota flights repatriated casualties from battle zones such as the Guadalcanal and the occupation of Japan. In the 1950s the Bristol Freighter carried casualties from Malaya.

“The capability to transport our servicemen and women from the point of injury to the next level of care is vital to enhancing their medical outcomes and will provide critical support to real-world operations.”

– Group Captain Peter Franken

From then until the late 1990s the Air Force was heavily involved in New Zealand supporting domestic civilian transport, inter-hospital, point of injury and Search and Rescue. Now due to increased demand New Zealand civilian services have largely taken over this role.

Before the dawning of the civilian services our military aviation evacuation clinicians were flying all the time at home. Domestic work prepared them to be permanently ready to deploy and work in that role.

To prepare for the role today we need our clinicians flying again so they are fully prepared in peace and war. Travelling full circle it is time to capitalise on the opportunities to work with the civilian sector and get our aviation evacuation clinicians in the air.
Seven new pilots and three new helicopter loadmasters have graduated at Base Ohakea. The graduates received their brevets from the Chief of Air Force Air Vice-Marshal (AVM) Andrew Clark in front of proud family, friends and fellow Air Force personnel.

In his speech AVM Clark congratulated the graduates on their hard work and commitment and for demonstrating that they possessed the necessary ethos to perform their duties.

“You can wear your brevets with a sense of accomplishment and as a reminder of the high standard you have achieved and are now committed to maintain. “From here on, your careers will continue to be demanding, rewarding and at times exhilarating. They may also be dangerous.”

Managing risk was a core part of the military aviation profession, he said.

“Sometimes the challenge you encounter will be uncomfortable, inconvenient and will require self-sacrifice. That’s why we also draw on our military values of courage, commitment and comradeship.”

The Royal New Zealand Air Force Sword of Honour was awarded to Flying Officer (FGOFF) Jason Anderson as the graduate who achieved a distinguished pass in all phases of the course. He was also awarded the De Lange Trophy.

The new pilot will be starting his career in the rotary wing flying helicopters.

“I was looking for an exciting day-to-day role and helicopters tick that box,” he said.

“Graduation has been a long time coming and there was a bit of nostalgia driving in and seeing the Texan flying, but it’s good to move on with exciting challenges ahead.”

Pilot Officer James Robertson-Bickers received the Wigram Trophy.

All the new pilots will either be posted to the RNZAF rotary wing fleet and learn the skills of flying helicopters on the A109 Light Utility Helicopter at No. 3 Squadron, or, will fly RNZAF fixed-wing aircraft and will learn this skill at No. 42 Squadron on the Beechcraft King Air 350.

The helicopter pilots will then go on to fly the NH90 Medium Utility helicopter or SH-2G(I) Seasprite helicopters at No. 3 or No. 6 Squadron respectively, whilst the fixed-wing pilots will go on fly either the C-130H(NZ) Hercules or Boeing 757-2K2 at No. 40 Squadron, or the P-3K2 Orion at No. 5 Squadron at Base Auckland.

The helicopter loadmasters will now be streamed into working as air crew for either the A109 or NH90 aircraft at No. 3 Squadron at Base Ohakea.

Acting Corporal Drew Manning said being a helicopter loadmaster “is not your average job”.

“I’m looking forward to getting out there and into it every day and just knowing that you’re working towards something that’s going to help the country and the Defence Force – it’s a really fulfilling job.”
Skyhawk Dedication

There was a double celebration at Base Ohakea on graduation day, with a rebuilt McDonnell Douglas TA-4K Skyhawk NZ6257 taking pride of place outside the Officer’s Mess.

Chief of Air Force Air Vice-Marshal (AVM) Andrew Clark and Wing Commander (rtd) John Scrimshaw, who trained in the aircraft when they were bought in 1970, unveiled a plaque at the dedication ceremony.

The air combat force had been a central aspect of the Air Force, AVM Clark told guests at the service.

“About half of the period we had an air combat force, we operated the Skyhawks. For a long time the air combat force was a huge part of the Air Force.”

It was a “fitting tribute” to have one of the aircraft displayed at the base, he said.

The Air Force purchased 10 A-4K and four TA-4K Skyhawks from the United States. The numbers increased in 1984 when an extra 10 surplus Skyhawks were bought from the Royal Australian Navy (RAN).

They were a stunning breath of fresh air for the combat capability and were homed primarily with No. 75 Squadron.

Considered a “multi-role” platform, the aircraft was capable of conducting fighter ground attack, air-to-air and maritime strike operations.

In the late 1980s, the fleet underwent a significant upgrade, “Project Kahu”, which dramatically improved their capability and vastly extended their working lives.

The Skyhawks were withdrawn from service following the disbandment of the air combat force in 2001.
Calling for help

This month *Air Force News* compares the evolution of emergency beacons. All aircraft need to have lifesaving equipment on board in case of emergencies and we see the interesting developments over time with the devices used to call for help.

‘GIBSON GIRL’ EMERGENCY TRANSMITTER

**YEAR: 1944**

Survival in the event of an emergency has always been a concern for air crew flying over water. During World War II, the US produced an emergency radio transmitter, based on a captured German design, to assist rescue efforts at sea. Officially called the SCR-578, it was commonly known as the ‘Gibson Girl’ (a reference to the personification of feminine beauty in the late 19th and early 20th centuries) on account of its hourglass shape. The Gibson Girl was designed to be used in a lifeboat, with its distinctive curved shape enabling the user to hold it steady between their thighs. It was powered by a crank handle generator, which produced a distress signal, in Morse Code. These radios were carried in RNZAF aircraft through until the 1980s.

*From the collection of the Air Force Museum of New Zealand*
The primary equipment employed by the RNZAF to aid in search and rescue missions for downed or distressed aircrew, the MR509/2 PLB is carried by all aircrew and fitted to rescue equipment such as life rafts. It provides a quick and easy means for personnel to beckon for help, whether downed in the sea or stranded on a mountain. It is GPS equipped to facilitate accurate location, and moreover it enables two-way communication with rescue services providing that reassurance that you’ve been found and that help is on the way. Even if you are unable to activate the PLB yourself it will automatically activate in water.
At a commissioning ceremony held recently Chief of Air Force Air Vice-Marshal (AVM) Andrew Clark appointed Dr Michelle Dickinson (MNZM) to the honorary rank of Wing Commander in the Royal New Zealand Air Force.

Dr Dickinson has deep roots with the Air Force growing up on various bases around the United Kingdom and suggests this led her into the world of engineering and science from a young age. Known around the world as ‘Nanogirl’ Dr Dickinson and the Nanogirl Labs team are passionate advocates for making Science, Technology, Engineering and Maths (STEM) accessible to all children and a topic of conversation in every household.

With accolades including membership of the New Zealand Order of Merit, Dr Dickenson is a recipient of the Women of Influence award (Science and Innovation), the Sir Peter Blake Leadership award, the Prime Minister’s Science Media Communication Prize and the New Zealand Association of Scientists Science Communication award. She is also the author of two highly successful books No 8 Recharged and The Kitchen Science Cookbook.

AVM Clark said the appointment was made in recognition of the significant contribution to the RNZAF Dr Dickinson has provided over several years, particularly as part of the RNZAF STEM investment/outreach programmes.

It is also an acknowledgment of the shared values across the two organisations and planned collaborative activity going forward. The RNZAF has a goal of attracting diverse talent in greater numbers to our organisation and presently has several STEM and aviation orientated outreach programmes offered to the community.

Wing Commander Dickinson will be hosted at RNZAF Base Whenuapai and joins six other honorary officers, holding the title for a period of three years.

“Dr Dickinson is a significant role model, we’re really proud to work alongside her and the Nanogirl Labs team doing our part to ensure equality of opportunity in the STEM space for Kiwi children right across New Zealand.”

- Air Vice-Marshal Andrew Clark

FROM LEFT TO RIGHT: Squadron Leader Rebecca ‘George’ Magdalinos, Dr Michelle Dickinson
Mixed Reality a Future Reality

In a small facility tucked away in a corner of Devonport Naval Base, a group of dedicated researchers are investigating how our future Air Force leaders could be using mixed reality during operational planning.

The work, being undertaken at Defence Technology Agency, involves a holographic map with real-time display of nearby aircraft, seen through specialised goggles.

Research scientist Iain Gillies, who developed the software for the Microsoft HoloLens, said it was known as “mixed reality” because the user could see the hologram over the outside environment, meaning they were still aware of the real world.

“This one here could be used in a Command and Control situation. This application could be used in planning missions and airspace coordination – especially if you want an understanding of where everyone is going to be in each area of operations. That can all be visualised on the map quite well.

“When a map is three-dimensional, it gives far more than what is used at the moment with a 2D screen,” he said.

The technology uses an ADS-B (Automatic Dependent Surveillance – Broadcast) receiver and antenna to track aircraft automatically broadcasting their identity, altitude, and position.

Research scientist Paul Garnham said by 2021 all New Zealand general aviation aircraft flying in controlled airspace will need to be ADS-B-capable.

Some aircraft, including the new King Air KA350s already have that technology, but all Air Force aircraft will need to be upgraded and the Ministry of Defence has initiated a project to do just that.

The range of the detection is line of sight, which means the detection range is dependent on the antenna’s location and height.

“We’ve got one on Mt Victoria, Auckland, and we can see aircraft at altitudes of 30,000ft above Whanganui,” Mr Garnham said.

“It’s neat technology and we just need to find out the best space to use it.”

- Iain Gillies
Flying High

Our parachute team is kitted out in advanced specialist equipment. Every item is designed with the absolute safety of the wearer in mind. The same gear is also used by our Kiwi Blue parachute team, which has entertained audiences around the country – most recently at the Wings over Wairarapa airshow.

Kiwi Blue Jump Suit

The suit, built by Toni Suits in the USA, is specifically designed to match the harness and main canopy of the Javelin Parachute System. It also has grippers on the upper arms to allow for linked exits and formation flying.

Parachute

The Javelin Parachute System is used by the Parachute Jump Instructors in all training and Kiwi Blue descents. It is a combination of the following parts:

- Javelin Odyssey Harness Container
- Sabre 2 Main canopy
- PD Optimum Reserve Canopy
- Expert CYPRES AAD
Parachute Safety
Mechanism
The CYPRES
(Cybernetic Parachute
Release System) is
designed to activate the
reserve parachute at a
pre-set altitude if the
rate of descent is over a
certain threshold.

G3 helmet
The G3 is a full face skydiving
helmet. It is designed to
give an unbeatable field
of vision and enhanced
communication. Special
technology makes sure the
visor will stay in place in even
the most extreme situations.

Audible Altimeter (Dytter)
The Solo is an audible Altimeter that is
located in the helmet. It is an additional
means of altitude awareness. It has
three freefall warning altitudes to help
keep track of where the parachutist is
in the sky.

ALFA Altimeter
The ALFA is a visual Altimeter which
gives accurate and reliable altitude
information. It is worn on the jumper’s
left wrist and together with the
audible Altimeter, makes the perfect
altitude awareness system.

Flag
The parachutist display flag assembly is
utilised by the Kiwi Blue parachute team.
The team flies the New Zealand National
Flag and the RNZAF Ensign. The flags
are designed to increase the visual
impact and footprint of the RNZAF and
New Zealand.
Most of my time is instructing on the P-3K2 Orion. I also provide additional supervision and management of the pilots and crews on the unit,” he said. SQNLDR Hogan became a reservist around five years ago, after almost 17 years in the regular force spending three years initially as an avionics technician and then 14 years as a pilot.

“When I left there were aspects of the job that I enjoyed, in particular the flying is quite different and working more closely with the people and crews.”

“I also really like the Orions, I’ve flown in them for the better part of 14 years – it’s like an old car that you really love.”

Having an experienced reservist return to work on a regular basis is beneficial in a job that relies heavily on experience to not only to keep personnel safe, but make the aircraft effective as a platform. Working with the P-3K2 Orion meant working with a big team, a complicated, demanding military role and from a team perspective, “there’s nothing harder than getting a group of between 10–15 individuals to work together to accomplish some pretty amazing tasks”, he said.

One amazing task he was involved in was the search for the missing Malaysia Airlines flight MH370 a Boeing 777, which is coincidentally what he currently flies for Air New Zealand.

“People talk about MH370 and it’s an interesting story, but it’s also a massive mystery.

“We didn’t think for a second we were even going to get to the search site, because we thought it would turn up and then when we got there, we thought we would be able to find it, but then we didn’t. And we didn’t find it the next day and the next day and we were really scratching our heads.

“We were working really hard. There was also massive media presence – I was doing radio interviews every day and was on the news shows. Then new information came in and we moved down to the Southern Indian Ocean out of Perth and again we thought we would find it, and then we didn’t – no one did. It’s a real mystery and it still bugs me.”

SQNLDR Hogan will soon be scaling back his reserve work as he is due a promotion at Air New Zealand and will become a Captain on the Airbus A320.

“But I’ll maybe stay involved in some capacity and will stay on the reserve. Who knows what will happen with the Orion exiting service and the Poseidon coming into service though – it’ll be easy to come back.”
“We conduct phone checks with the North Korean side twice a day and I regularly pass on or receive messages from them via the hotline,” said Flight Lieutenant (FLTLT) Daniel Garnett, who is the Assistant Joint Duty Officer in the United Nations Command Military Armistice Commission Secretariat (UNC MAC-S).

“Our team talks to them all the time, though we send a lot more messages than we receive,” he said.

Regarded as a bellwether of inter-Korean relations, the hotline at Panmunjom, the truce village inside the Demilitarized Zone (DMZ), was reactivated in mid-2018 following the warming relations between the once-hostile neighbours.

Before that North Korea had not answered the hotline for more than five years, in retaliation for the United Nations sanctions imposed on Pyongyang following a nuclear test on February 2013.

Since he was posted to South Korea last October, FLTLT Garnett said he had passed on messages informing North Korea of the use of helicopters in the Demilitarized Zone, repatriation of remains of North Korean troops killed during the Korean War, and meetings and routine building maintenance at the border.

The calls are scripted and the messages are relayed in English and Korean.

FLTLT Garnett is based at Camp Bonifas, a UN Command military post 400 metres south of the southern boundary of the Demilitarized Zone. He is part of a six-member team that monitors the 1953 Korean Armistice Agreement between North and South Korea at the Joint Security Area in the zone.

As part of his role, he helps supervise access to the Joint Security Area at Panmunjom.

“We know each other’s names, some are friendlier than others – one greeted me with ‘Happy New Year’ in January.”
Airmen Top Canadian Course

Two RNZAF Intelligence Officers recently graduated from the Canadian Armed Forces (CAF) Basic Intelligence Officer Course (BIOC) in Kingston, representing us proudly by finishing first and second on the course - from a total of 20 students.

This is only the second time RNZAF Intelligence Officers have attended the BIOC, with the first student graduating early last year.

The students’ Commanding Office, Wing Commander (WGCDR) Rachel James, said that they felt fortunate to have had the opportunity to be taught by the Canadian Armed Forces on BIOC.

“They tell me the course was challenging, but the staff were resoundingly knowledgeable and caring. Although the result was pleasing, they will be most grateful for the connections they’ve made with course mates. For them the experience lived up to the hype. “While the course was long and challenging, the chance to build relationships with their Canadian course mates and learn from their highly experienced instructors was definitely worth the trip. Both of them topping the course was the cherry on top.

Prior to 2017, Intelligence Officer training had been conducted primarily through the Australian Defence Force, however high demand for Australian training has challenged their capacity to support RNZAF training and Trade Leaders have had to look to other Five Eyes partners for complementary training opportunities.

This engagement has resulted in the RNZAF securing slots on training courses in both Canada and the United Kingdom, and while Australia remains our closest partner, this has presented a great opportunity for wider networking and junior officer development.

RNZAF Intelligence Specialists (non-commissioned personnel) have conducted training courses in Canada for a number of years with similar excellent results.

In 2018, with the Chief of Defence Intelligence’s support, the RNZAF embedded an NCO instructor into one of the specialist schools, in order to grow some capacity with a view to bringing portions of intelligence training back to New Zealand – an aim of the Joint Intelligence Programme. Other initiatives are currently being scoped which could see additional RNZAF Intelligence Specialists in Canada later in 2019.
NZDF Awarded Top Health Prize

The New Zealand Defence Force’s Integrated Wellness and Mental Health team has won the Health Safety and Wellbeing Award at the Human Resources Institute of New Zealand (HRINZ) Awards, held at Sky City in Auckland.

HRINZ holds the awards annually to recognise excellence within the New Zealand human resources community.

The award recognises excellence and outstanding achievements in the health, safety and wellbeing of employees in their workplace.

Chief Mental Health Officer Colonel Clare Bennett said the team’s initiative was a programme focused on improving the mental health and wellbeing of our personnel.

“We are a subset of the New Zealand population, with similar rates of mental ill-health as everyday New Zealanders,” Colonel Bennett said. “Plus, the nature of our work and military lifestyle can place unique demands on our personnel and their families.

We were hearing that our people were sometimes reluctant to ask for help.”

The traits that make us a successful fighting force – being strong, self-reliant and in control – could also make us vulnerable because it makes it harder to ask for help, Colonel Bennett said.

“So this was and still is our challenge – to decrease mental ill health and increase help-seeking behaviour.”

The team’s focus was to shift from a treatment-focused model of care to a comprehensive health and wellness model that placed importance on mental, physical, social and spiritual health.

The team also developed a range of resources to equip people with the information and tools to recognise and manage wellbeing challenges, and to know when it was time to seek help and how to find help.

“These tools have been shared across the Government sector and many other organisations,” Colonel Bennett said.

“The programme has turned strategy into tangible outputs – new policies, practices, projects, and accessible tools and resources, and a strong focus on how leadership influences the culture for positive mental wellbeing.”

The result had been improved mental health and wellbeing, and an increase in help-seeking behaviour, she said.

“NZDF is still at the beginning of its health and wellbeing journey, but we are celebrating the progress that has been made so far.”

LONG-DISTANCE FLYING IS IN OUR DNA

Reach

The ability to project military power over long distances largely unconstrained by physical barriers

Air Power in Action
The first use of air power was to observe the battlefield from the air; the advantage of height allowing more to be seen than is possible from the ground.

Details of the unfolding battle was reported to commanders, enhancing their situational awareness and informing their decisions. Until 1911, this role was usually performed using manned balloons but in October of that year the first reconnaissance flight using powered aircraft was undertaken by the Italians during the Italo-Turkish War in Libya. Later, during WWI, scouting aircraft were regularly reconnoitring the battlefronts of Europe.

Reconnaissance, and its companions surveillance and intelligence, remain fundamental to air power, and to the conduct of warfare itself. Collectively, Intelligence, Surveillance, and Reconnaissance (ISR) has far wider applicability than just on the battlefield and is central to a country’s ability to understand what is happening within its borders, and outlying maritime region.

ISR aircraft are routinely deployed into international waters to monitor sea lines of communication, more commonly referred to as sea lanes, in order to ensure that international trade is not impeded by pirates or arbitrary actions of other nations. In the same manner, sea lanes and maritime areas are monitored for illegal activities, to ensure international sanctions are upheld, or to support government agencies.

For example, No 5 Squadron RNZAF has recently conducted surveillance missions in New Zealand waters, and around the world, for the following purposes:

- Identify illegal fishing activities in the Ross Sea.
- Monitor UN sanctions against North Korea.
- Carrying out a census of southern right whales in New Zealand Sub-Antarctic Islands.
- Cyclone and earthquake damage reconnaissance.
- Identify acts of piracy, and people and drug trafficking in the Middle East.
- Various search and rescue missions in the Pacific.

This article is part of an occasional series of articles produced by the Air Power Development Centre to help demystify the concepts of air power, so we can all understand how air forces use air capabilities to influence the course of events.
When required, other Air Force squadrons also undertake surveillance and reconnaissance missions such as a No. 40 Squadron C-130 aircraft dispatched to look at forest fires on the Chatham Islands, a No. 3 Squadron NH90 helicopter conducting aerial patrols of Fiordland, and a No. 42 Squadron B200 King Air aircraft deployed to assess cyclone damage in the Pacific.

But, what do we mean by the terms Intelligence, Surveillance, and Reconnaissance? First we will start with surveillance, which is the systematic observation of air, surface or subsurface areas, and places, by visual, aural, electronic, photographic, or other means. Simply put, surveillance is a wide-area search carried out over a long period of time and is about monitoring and collecting information about an area of observation, and looking for abnormalities and potential threats within that area. In terms of New Zealand’s Exclusive Economic Zone (EEZ), airborne surveillance is carried out regularly and will continue well into the future.

However, we may see aircraft based surveillance of the EEZ being supplemented with Earth observation satellites.

Reconnaissance is slightly different. It is a specific mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an adversary, or potential adversary, or to secure geographical data about a particular area. While surveillance may detect something amiss in an area, reconnaissance is about understanding what is going on. Further, in terms of disaster relief, reconnaissance is vital to understand the effects of a cyclone, earthquake, or tsunami. From the information gained, appropriate support can be provided to the communities requiring assistance.

Intelligence is the product resulting from the processing of information gained during surveillance and reconnaissance missions. It provides national leadership, or military commanders, an understanding of what is happening in an area of concern, including supporting details such as weather, cultural, and geographical aspects relevant to the situation.

The strategic role of ISR is to enable decision superiority by providing key pieces of data, information, and intelligence that assists the Air Force, NZDF, and New Zealand Government in achieving its objectives. ISR’s tactical role is to provide battlespace awareness, and information superiority, and therefore, decision superiority to military commanders. Basically, ISR involves getting the right information to the right people, in the right format, at the right time.

By providing the best possible intelligence to the military commander, they can plan and make the best operational decisions. Air and satellite based ISR is used to achieve an early awareness of potential crisis points and enhance the quality of political and high-level military understanding that leads to informed decision-making.
Show Ability and Opportunity Will Knock

Wing Commander Dave Brenssell has some advice to Limited Service Volunteers (LSV): Work hard, show ability and the opportunities will come.

WGCDR Brenssell should know – he was one of those recruits, on the first-ever Air Force LSV course in 1984.

He did it because he wanted to join the Air Force after finishing college but there were no intakes until later in the year. The then Labour Department mentioned the LSV course and 35 years later he’s still serving.

“It really boils down to two things and when I talk to younger people I tell them, it’s about ability and opportunity. It’s a bit of a chicken and egg-type scenario – you demonstrate the ability and you’ll get an opportunity,” he said.

“It was a simple piece of advice given to me when I was young, and it’s paid off.”

Doing the LSV course didn’t exempt him from doing any part of his recruit training but it did give him an insight into, and preparation for, military life.

“I’ve developed to be a senior officer now, and a leader, but probably the genesis of that was back then because I had the time and the capacity to have a bit of a think about it, so I was able to achieve quickly when I got into the organisation.”

The opportunity WGCDR Brenssell had will be available to more young people with the doubling of the programme to 1600 by next year. A 160-bed $11 million purpose-built facility will open at Whenuapai in June and will offer five courses a year, while the existing facility at Burnham Military Camp will continue to cater for five intakes of 120 each year. As well, a 90-bed facility at Trentham in Upper Hutt will offer four courses a year.

LSV is a Ministry of Social Development course, run in partnership with the New Zealand Defence Force (NZDF), and currently runs for six weeks, rather than the 20 weeks when WGCDR Brenssell enrolled.
The huge growth in the scheme’s capacity is also opening up opportunities for NZDF personnel interested in training youth who are ready to get more out of their lives.

Assistant Chief of Defence Reserves Youth and Sports Captain Simon Rooke said 52 extra trainers and staff were needed, mainly in Auckland (Whenuapai) and Wellington (Trentham), to add to the current 98 Youth Development Unit personnel.

“We’re working to form our training teams, get them into location and ensure they are fully prepared to provide the unique training required to support the LSV programme,” he said.

“There are some unique skills sets Youth Development staff require. Our instructors really enjoy the variety and reward the role offers, and we’re always ready to welcome anyone who would like to make a positive contribution to LSV by joining the YDU team in Auckland, Wellington, or Christchurch.”

The importance of getting the right people, and the value they add, has been recognised with the move to make those trainers Youth Development Specialists.

“Over the years we’ve relied on people posting in from all over the services, and that’s fine and we want that to continue to some degree,” CAPT Rooke said.

“But what we’re doing now is putting all the brickwork together to make sure those people are of a standard required by legislation, that the training they have to do is better understood and able to be delivered, and that it’s a much more rewarding career pathway for individuals who commit to it.

“We want to set this towards a professional trade group who are youth development people.”

WGCDR Brenssell encouraged personnel wanting to give back to “New Zealand Inc” to consider the trade.

“You’re not there to change people’s lives. You’re there to assist them, and find them a different perspective. I don’t think you should be going there thinking ‘I’m going to change somebody’s life’, ‘I’m going to be a saviour’. It’s not like that. It’s about your skills being available to other people so they can look at you from a values perspective … and being a sounding board.

“I suspect the biggest job you will do in a job like that will be listen, because if you can’t listen then you’re probably missing the point.”
It’s an unfortunate fact that one of the by-products of air transport is noise. This is usually associated with aircraft taking off, when maximum power is required to hurl tons of metal into the sky.

But on occasion, there is the sound of engines being run on the ground, which can produce a drone like a 4000 shaft-horsepower mosquito.

So why do aircraft need to run their engines on the ground?

“Usually, it is the final test of all the components of the power-train to make sure everything is working correctly,” No. 40 Squadron Deputy Maintenance Flight Commander Flight Lieutenant (FLTLT) Nick Luther explains. The power-train might be just the engine in the case of the Boeing B757, or the engine and propeller for the P-3K2 Orion or C-130 Hercules. Helicopters also do engine runs, with or without the rotors spinning.

After any maintenance action, the manufacturer’s manuals will direct whether engine runs are required. “This is to satisfy that what has been done has been accomplished,” says FLTLT Luther. For obvious reasons of safety, the components are tested as much as possible on the ground, to ensure they have been installed correctly and are working properly.

Depending on the component being worked on, engine runs can vary from fairly brief low-power runs, to more extensive high-power runs when the engines are operating at maximum capacity. In the latter case the engine is ‘tuned’ for optimum performance and the run itself can take several hours to complete.

Engine runs may also be required to assist fault-finding, or to pressurise the aircraft on the ground to test other components by replicating air-borne conditions.

The timing of engine runs is not always ideal, but again there is a good reason for this. “Our flying operations take place mainly during daylight hours, so if a fault occurs, we can only fix it when the aircraft is back on the ground”. Engine runs are the last step in a maintenance task, therefore it is not uncommon to have to do the runs at night after a full day of rectification.

With a limited number of aircraft frames, there may well be a requirement for that aircraft to fly again the next day. This may necessitate engine runs at night to ensure the aircraft is good to go on the next mission. With an Orion on constant standby for Search and Rescue, and a Hercules and NH90 helicopter always standing by ready for any kind of national contingency, it sometimes means breaking the bases’ self-imposed noise curfew to make sure there is an aircraft ready to answer the call if needed.

So if you are near a base on a still summer’s night, and hear the sound of an aircraft engine without seeing anything in the air, it is probably the hard-working maintenance team making sure our aircraft are ready to launch on their next call to duty.
579 AIRCREW REUNION
The 40 year reunion of 579 Aircrew will be celebrated on the weekend of 17–19 May 2019 in the Auckland area.
A lot of laughs anticipated!
If you were part of the 579 Aircrew course in May 1979 or know someone who was, please contact Paul Simpson; kmshigh@yahoo.co.nz or 0211420388

NO. 41 SQUADRON NOTICE
No. 41 Squadron RNZAF 2019 reunion registration is now open.
The reunion will be held in Christchurch April 12–14, 2019.
For ex-squadron members, registration forms are available from:
2019 Reunion Committee, C/- 4 Chesterfield Place, Rangiora, Christchurch 7400, or via email: alandbzb@gmail.com.

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Being in the back of the Hercules while SAS soldiers and boats are disappearing out the back, is one of the more exciting tasks I get to cover as an Air Force photographer. During this exercise, the Air Force and Navy worked together with New Zealand Special Forces to conduct some training in the Hauraki Gulf. Once the soldiers and the inflatable boats landed on the water, the soldiers got in the boats and met up with HMNZS Canterbury.
Ko te Tauaarangi ahau

We are an Air Force of many religions, cultures and beliefs
Together we stand for all New Zealanders

- Chief of Air Force, Air Vice-Marshal Andrew Clark