

# HVAC&R Nation

AN AIRAH PUBLICATION



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How HVAC&R is helping  
Townsville get back on its feet

# Fridgies in the forces

Plying your trade in the Australian Defence Force



A man in military camouflage is sitting on the side of a military aircraft in a hangar. The aircraft is dark green and has a large cockpit. The hangar has a high ceiling with white structural beams. The man is wearing a yellow and brown camouflage uniform and is looking towards the camera.

# FRIDGIES IN THE FORCES

As we have seen in previous feature stories, there's practically no part of our nation where you won't find HVAC&R technicians working. This month, **Sean McGowan** looks at the careers of two fridgies working in the Australian Defence Force.



Warrant Officer Class Two Michael Quirk attained his certified trade qualifications through the Australian Army and now works on aircraft including the ARH Tiger helicopter.



It may come as a surprise, but the Australian Defence Force (ADF) is an active employer of tradies, including fridges and HVAC&R engineers.

The ADF is made up of the Royal Australian Navy (RAN), the Australian Army and the Royal Australian Air Force (RAAF). HVAC&R tradespeople in the ADF maintain systems on some of the most advanced equipment in the world, from sophisticated helicopters, to battle tanks, to a 30,000-tonne warship.

The job opportunities in the ADF are certainly attracting the attention of many, including trainees and fully qualified tradies.

If you're qualified, your civilian skills may transfer directly into the ADF with minimum on-the-job training required. If not, there are many traineeship positions available where the ADF provides all the relevant training to become fully qualified.

These are the two distinct paths taken by Australian Army Warrant Officer Class 2 (WO2), Michael Quirk and Royal Australian Navy Petty Officer, Shaun Ware.

## BROTHERS IN ARMS

After completing his Year 12 studies, Michael Quirk was unsure of the career he wanted to pursue.

His father was a builder, so Quirk had grown up around the construction industry and was keen to learn a trade. But because he also had an interest in aircraft, his brother – himself in the Army – suggested Defence as an option to obtain a trade qualification.

"I jumped at the chance and applied to join the Australian Army," says Quirk. "My initial plan was to complete the required six years and take my trade qualification and return to civilian life."

Having recently reached 21 years in uniform, Quirk hasn't looked back.

## TO THE CHOPPER

To become a qualified aircraft tradesperson, Quirk completed a Certificate III in automotive air conditioning that combined a blend of Defence and TAFE-based study.

"As a registered training organisation (RTO), Defence is able to provide the necessary training to receive the equivalent Certificate in line with civil industry," he says. "Where Defence can't provide the training, they use civil industry or TAFEs to meet the trade requirements."

Although his initial employment training introduced him to the basic theory of oxygen and air conditioning systems, it wasn't until he moved from working on Blackhawk helicopters to the Armed Reconnaissance Helicopter (ARH Tiger) aircraft that Quirk had an opportunity to put his trade qualifications into practice.

It was then that he realised just how interesting the trade could be.

"The ARH Tiger was the first Army helicopter to use an air conditioning system," he says.

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HVAC&R tradespeople in the ADF maintain systems on some of the most advanced equipment in the world

His current role includes the maintenance of the aircraft systems and keeping the aircraft in a serviceable state, so they are deployable when required.

"The main responsibility when working on the air conditioning system is to comply with the environmental regulations and the workplace health and safety requirements by ensuring everyone working on the system is compliant."

When not deployed or on exercise, Quirk says his working hours are equivalent to most civilian jobs.

"The big difference is the variety of work that you do," he says. "Being in the Army you are required to be a soldier first, which means you need to maintain skills such as weapon handling and fitness on top of your trade skills."

"So one day you could be fixing aircraft and the next you may be at the (firearms) range or out in the field. This variety is what I enjoy most about the job."

## FROM REFRIGERANTS TO RATIONS

Quirk says that although the variety of his job is enjoyable, training exercises and deployments can be challenging.

"On exercise, you may be out in the field living in tents and eating ration packs whilst still being responsible for maintaining the aircraft," he says. "And on deployments, it can be challenging to be away from family for extended periods of time."

Then, of course, there are the challenges and threats of working within a conflict zone.

"However, deployments also provide the opportunity to make a real difference," Quirk says.

## ELECTRICAL TECHNICIAN IN THE ARMY

At the time of publication, the Australian Army was recruiting for full-time electrical technicians to serve in the Corps of the Royal Australian Electrical and Mechanical Engineers (RAEME).

Posting to large Combat Service Support Battalions (CSSB) located in Brisbane, Darwin and/or Townsville, the role involves servicing and repairing a variety of equipment and appliances including refrigeration and air conditioning systems, vehicle electrics, generators and portable electronics.

Entry to this trade is open to qualified, partially qualified and non-qualified applicants aged between 17 and 52.

Upon entry to the Australian Army, all general entry recruits are required to complete military training. The 80-day Recruit Course requires you to take part in physical training, weapon handling and shooting, first aid, drill and field craft. On-the-job trade training then follows.

For more information about similar roles, visit [www.defencejobs.gov.au](http://www.defencejobs.gov.au)



**Petty Officer Shaun Ware is a maintenance fitter in the Royal Australian Navy and is posted to the Defence Force's specialist recruiting team for trades, where he recruits the next generation of ADF tradespeople.**

"I have had the opportunity to help with humanitarian assistance when natural disasters strike, such as flood relief efforts in Townsville or cyclone assistance in Vanuatu. This is what makes the job so rewarding."

## IN THE NAVY

Originally from Philip Island in Victoria, Petty Officer Shaun Ware joined the Navy as a marine technician at the age of 21.

"I had previously completed a trade in the construction industry and was looking to broaden my trade skills and gain new experiences," says Ware.

Although he had seen the HVAC&R trade while working in the construction industry, it wasn't until he

## TRADE IN YOUR CAREER

The Australian Defence Force (ADF) has positions across Navy, Army and Air Force in over 33 trade roles including automotive, aviation, construction, mechanical, electrical, electronics and telecommunications.

Committed to recruiting technologically minded individuals who can perform under pressure, the ADF displays all available jobs on its website, as well as detailed fact sheets explaining all aspects of the roles available.

"My advice to anyone interested in a career in the Navy, Army or Air Force is to come and have a look, and see what we have to offer," says Australian Army Warrant Officer Class 2 (WO2) Michael Quirk. "It may surprise you."



Strange operating parameters can make fault finding an interesting exercise

joined the Navy and gained a Certificate III qualification that his interest in the trade was really sparked.

"My core training and role in the Navy is as a maintenance fitter in the marine environment," he says.

"However, over the course of my career I have built on my skillset and gained qualifications in HVAC&R and electrical that have allowed me to diversify my career and the equipment I am able to maintain."

Since joining the Navy in 2003, Ware has served on many different types of naval vessels and held many shore-based positions, both in and out of his core trade role. These positions have not only given him the opportunity to be deployed overseas, but also live in most states of Australia.

## SEA IT TO BELIEVE IT

As a qualified maintenance fitter, Ware's role when at sea can be incredibly diverse.

"The structure of a typical day at sea could consist of not only defect rectification and planned maintenance on the HVAC&R systems, but also maintenance of the mechanical and electrical systems," he says. "You could also be required to undertake shift work as the on-watch engineer."

According to Ware, the maritime environment is unlike any other.

"I have seen failures of components due to environmental considerations like vibration and salt degradation – things that don't usually exist in the (civilian) industry."

Although most equipment is similar to that used in the broader HVAC&R industry – including the use of common refrigerants such as R134a, R404A and R507C – he says there are notable differences.

"Some of our HVAC&R systems use saltwater as a cooling medium and require particular diligence in surveying them for corrosion and possible failure points," he says, "as well as keeping the sacrificial components changed on a regular basis."

Ware says equipment can also require re-engineering to operate on a moving platform.

"This can cause sometimes strange operating parameters that can make fault finding an interesting exercise."

And although the ADF follows all Australian industry codes and standards, there are times – such as during operational and/or conflict situations – where improvisation is required.

## SAGE ADVICE

Ware says the ADF actively seeks to recruit from industry, and recognises the benefits that industry professionals can bring.

"The experience and insight into the industry greatly benefits both the ADF and the individual," he says.

"I would highly recommend anyone from the industry that is interested in a career in Defence to have a chat with their local recruitment officer. You don't know what roles may be available until you ask." ■

AIRAH and HVAC&R Nation acknowledge and thank Australian Army Warrant Officer Class 2 (WO2) Michael Quirk and Royal Australian Navy Petty Officer Shaun Ware for their continued service to our nation.

We also thank the Australian Defence Force for making them available.