



IRISH AIR CORPS OPERATIONS WING WATCHFUL AND LOYAL

The Irish Air Corps' Helicopter Wing, initially formed to focus mainly on Search-And-Rescue (SAR) operations during the 'Big Freeze' in 1963-64, has since developed to provide both air medical and support roles to protect and serve communities throughout the country, making this small force one of the most modern institutions of its kind in the world, writes Lukasz Gancarz.

Ireland is well known for its mild climate and evergreen fields, but the weather here can change in an instant. It is so common to experience all four seasons within a single day that an oft-repeated refrain goes "If you can fly in Ireland, you can fly anywhere".

It was the gnarly winter of 1963-64, remembered woefully as the 'Big Freeze' that proved this saying correct and demonstrated both the need for and utility of rotorcraft in the Irish Air Corps. It had not been as cold over the last 200 years with ponds, lakes and rivers freezing solid, as towns and villages were cut off with supplies running very low.

People in need of urgent medical care were put in a life-threatening situation with no means of transportation.

Families were stranded in their own homes with local emergency services battling through the snow to gain any access to those in need. Ireland's Defence Forces deployed troops to provide rations and evacuate those people worst affected countrywide.

HELICOPTER WING TAKES OFF
Irish Air Corps crews did their best to drop food where possible, but it was barely enough, with high winds and low visibility jeopardising all relief efforts. And it soon became painfully obvious that the State needed its own

dedicated rotary division.

The decision was made to form the Helicopter Wing of the Air Corps, which would focus mainly on Search-And-Rescue (SAR) operations.

After long consideration, the Irish Government placed an order for three *Aérospatiale Alouette III* helicopters. The first two were delivered in 1963 and the third helicopter followed in 1964.

The *Alouette III* is a light, multirole, single engine helicopter developed by the French *Sud Aviation*, which had seen service across the globe. A total of eight *Alouette III* helicopters saw service in Ireland between 1963 and 2007, initially with the Irish Air Ambulance Service.

Irish Air Corps helicopters were regularly deployed on SAR missions, troop transport and explosive ordnance disposal operations. The rising number of tasks and an outstanding success rate of helicopter



The AgustaWestland AW139 is capable of undertaking a full spectrum of missions including HEMS, firefighting and patient transport.

SAR operations was an indication that a new type of aircraft was needed to meet public demand.

The Aérospatiale SA 330 Puma was leased from its manufacturer to fill in the role of a heavy-duty workhorse. It was only in 1982 when the Aérospatiale SA 365 Dauphin II (now the Airbus AS365 Dauphin) was chosen to fill the SAR role.

The Aérospatiale SA342L Gazelle was purchased to work as a training aircraft for the pilots who wanted to move onto the Dauphin. It was the first aircraft with a full glass cockpit introduced to Ireland's fleet. However, it soon became clear that the Dauphin was not well suited for SAR operations, especially in bad weather.

CREW RESOURCE MANAGEMENT

Another leap forward was marked by the introduction of the Crew Resource Management (CRM) system, known well in civil aviation circles. It was designed to include all staff working both on the ground and in the air.

This project continues to be managed by Lt Col Phillip Bonner, who until recently was the Commanding Officer of No. 3 Operations Wing. The main idea was to give everyone involved with the Air Corps – from flight attendants,

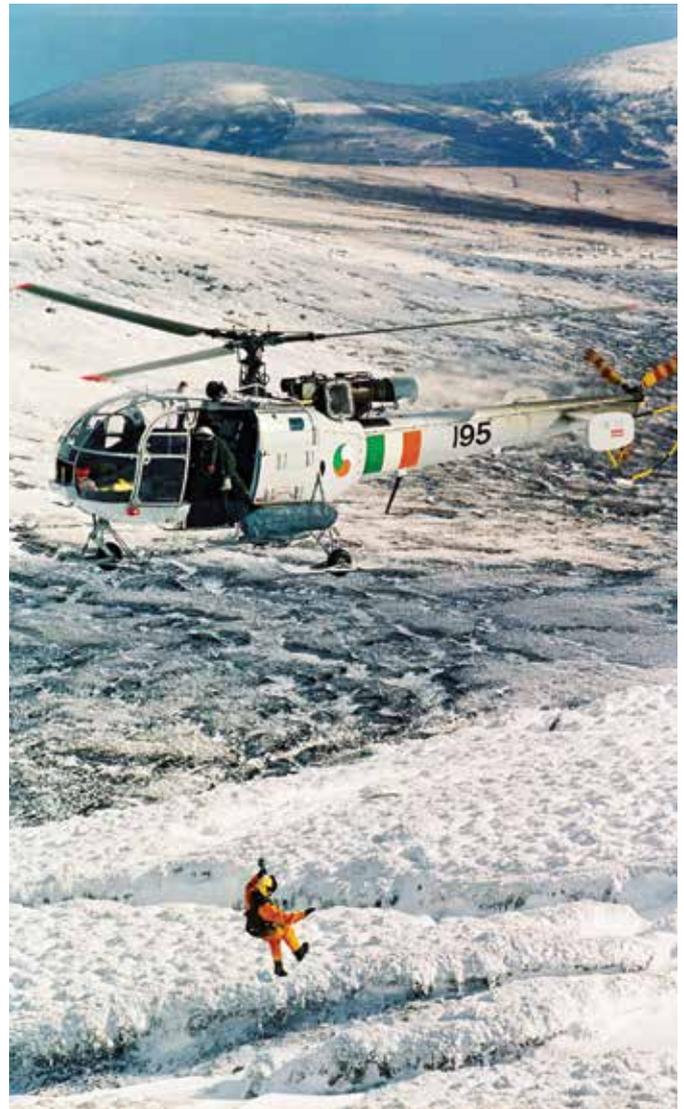
engineers and flight crews all the way to janitorial staff – responsibility for the safety and performance of its operations.

With new training standards in place, CRM was introduced to the Garda Air Support Unit (GASU). The Air Corps provided both the pilots and a Eurocopter (now Airbus) AS355N Twin Squirrel for An Garda Síochána, beginning in September 1997.

In January 2008, a Eurocopter EC135 T2 was purchased. From 2005 to 2008, both aircraft contributed to over 1,300 arrests and located 14 missing persons during SAR details.

The Irish Air Corps provided the pilots, whilst the Gardaí provided two more crew positions: the mission commander seated in the back of the aircraft and a second crew member sitting beside the pilot. Again, all crew members are fully CRM trained and they can assist the single pilot in a variety of tasks, such as verifying checklist items or assistance during an emergency operation.

The AS355N was replaced in 2007 by a second EC135 T2+. After nearly 20 years of co-operation, both the Air Corps and An Garda Síochána have developed a perfectly balanced service to the public, operating on a 24-hour basis.



The Alouette III pictured on a 'Big Freeze' mission during the winter of 1963-64, which highlighted a need for the State's own dedicated rotary division, and resulted in the formation of the Air Corps' Helicopter Wing to focus mainly on Search-And-Rescue (SAR) operations.



The Athlone-based HEMS unit has proven itself to be a major addition to the general public in Ireland. Today, the No. 3 Helicopter Operations Wing provides three major services – Garda Air Support, emergency medical services and air mobility.

HEMS COMES ON BOARD

Each pilot attached to the No. 3 Wing works under orders from their commanding officer. In GASU, the pilot in command (PIC) makes the final call on whether the mission tasked by the dispatcher is flyable or not. CRM shines when there could be significant pressure involved in the decision-making process – especially with high-risk arrests, or the pursuit of armed criminals.

The EC135 had proven itself to be such an effective tool for all-weather operations that two more aircraft were fielded by the Irish Air Corps in 2004. Soon after, a search commenced for a complete SAR and helicopter emergency medical services (HEMS) capable platform, which can also fill some traditionally military roles.

The AgustaWestland (now Leonardo) AW139 was chosen to replace a veteran fleet of Dauphins, capable of undertaking

a full spectrum of missions including HEMS, firefighting, troop insertion and patient transport. Floor sections of the aircraft can be modified for carriage of not only a specialised stretcher base

but also an advanced neonatal unit. Additionally, all of the AW139 pilots had extensive EC135 experience. With a very intense training regime, the Air Corps prepares each pilot for their



Advanced paramedic David Irwin receives information electronically about a casualty while Corporal Dermot Corcoran checks the route for obstacles and alternative approaches before landing.

future roles. The training programme is tailored to prepare the cadets to operate on multiple aircraft types in all weather conditions.

PILOT TRAINING REGIME

The first step in becoming a fully qualified pilot with the Irish Air Corps is passing a seven-month period of basic military training. Next comes fixed-wing ground school, during which CRM is imprinted into the recruits' minds after which crews are familiarised with the Pilatus PC-9M.

The cadets accrue 130-150 flight hours and approximately 20-50 simulator hours and upon completion of flight training they then proceed to their advanced flight training on the Pilatus PC-12, CASA CN235 or EC135.

After passing the year-long

Helicopter Conversion Course, pilots are trained on the EC135 to perform air ambulance missions. They then proceed to the AW139 to complete a period as co-pilots on the aircraft, which includes time on EAS, before being dispatched to GASU. After three to five years spent with GASU, pilots are sent back to No. 3 Helicopter Wing where they continue to operate and train on the AW139 as needed.

Probably the most vital task of the No. 3 Helicopter Wing is the provision of emergency medical services. In 2011 a 12-month pilot project was launched to test possible advantages of having a helicopter with a full crew on standby to provide daytime HEMS flying under visual flight rules. CRM was a defining element of the programme, which Lt Col Bonner helped to launch.

One of the unique challenges at the beginning of joint operations was integrating two very different operational cultures. Pilots and aircrew used jargon unfamiliar to medical personnel, while paramedics used medical terminology previously unheard by the aviators. CRM training was again modified to educate military staff on medical phraseology, with one of the Air Corps crew members trained as a medical technician, capable of assisting with casualty care.

The same approach went towards the medical staff who were introduced to the Air Corps procedures and operations, making them permanent members of the HEMS team. EAS flights were initially performed with an EC135 before the larger and more capable AW139 was brought online.



During EAS operations, every crew member is responsible for safety, including paramedics and advanced paramedics.



The service significantly reduced transit times for the patients and in 2013 it became permanent. Another big step forward was to include the dispatcher's offices, which are located over 100 miles (160km) from Athlone, by installing a set of cameras in the HEMS briefing room. This allowed the dispatcher to see and hear the pre- and post-action briefings, fully incorporating them into the advanced CRM system in place.

STANDARD DAY FOR CREW

A standard day for a HEMS crew starts with an operations briefing carried out by the commanding officer (CO). This includes a weather summary prepared by the first officer and a technical report by the engineers. While the first officer reviews the pre-designated landing sites and reports from previous duties, the commanding officer carries out a thorough pre-flight inspection of the aircraft, after which the helicopter is set up for a quick start-up.

Training flights are planned as required for the day, depending on weather conditions. Once a call comes in from the dispatch center, it is considered by the advanced paramedic. If it qualifies for a HEMS

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response, a mission is initiated, and the commander starts up the helicopter. At the same time, the first officer checks the location of an incident and assigns a pre-designated landing site or creates a new one if needed.

With location and route planned, the remainder of the crew boards the helicopter for an immediate departure. When airborne, the paramedic receives constant operational updates from the dispatch center. In many cases an ambulance team will be on the scene first and can confirm if HEMS response is needed.

Upon arrival, the crew surveys the landing site, looking for any obstacles which could put the aircraft in danger. Several tight turns are made while every crew member checks the landing zone.

BECOMING THE EYES AND EARS

With transition into hover and imminent landing, the Air Corps crewman becomes eyes and ears for the pilots. They will verbally confirm

the aircraft's distance from the ground, possible debris and finally, contact with the ground.

Immediately upon touchdown both a paramedic and an Air Corps medical technician will meet up with the ambulance team on the ground to assess the casualty. Within minutes of landing, usually with the aircraft on stand-by with engines idling, the medical crew returns to the helicopter, which then takes off and heads for the nearest and most appropriate hospital.

Sometimes, when more specialised assistance is needed (such as for neonatal care) the Air Corps' fixed-wing aircraft will fuel up to help out. With the component's CASA CN-235 ready at Casement Aerodrome, a young patient can be immediately transferred and transported to an advanced care unit in the UK.

With full co-operation from all emergency services involved, the Athlone-based HEMS unit has proven itself to be a major addition to the general public in Ireland. Today, the

No. 3 Helicopter Wing provides three major services – Garda Air Support, emergency medical services and air mobility.

GLOBAL PEACEKEEPING MISSIONS

The Irish Defence Forces have actively taken part in global peacekeeping efforts since 1958 – from Central America to Africa and Asia and when called upon by partner nations and allies.

Apart from its local aid to the general public, the No. 3 Operations Wing was deployed to Northern Ireland in 2018 to assist with extinguishing brush fires.

Two AW139s, each equipped with a 1,200-litre (317-US gallon) Bambi Bucket, worked directly over the affected areas and an EC135 was used as an observation platform. While the Irish Air Corps has previously been used in cross-border operations, this was the first time the helicopters were used to directly tackle fires.

The Irish Air Corps' Helicopter Wing continues to develop and adjust its innovative training and staff retention programmes, making this small force one of the most modern institutions of its kind in the world.

While a pilot and staff shortage continues to be a global issue, in Ireland training is being adapted to attract not only new recruits and engineers, but most importantly to ensure that staff remain in service until retirement. The Irish Air Corps constantly adapts to remain one step ahead of global aviation trends.

Since its foundation, no less than 14 Distinguished Service Medals were awarded to the members of the Helicopter Wing, who proudly adopted the international SAR motto: 'That Others Might Live' ('Go Mairidis Beo')

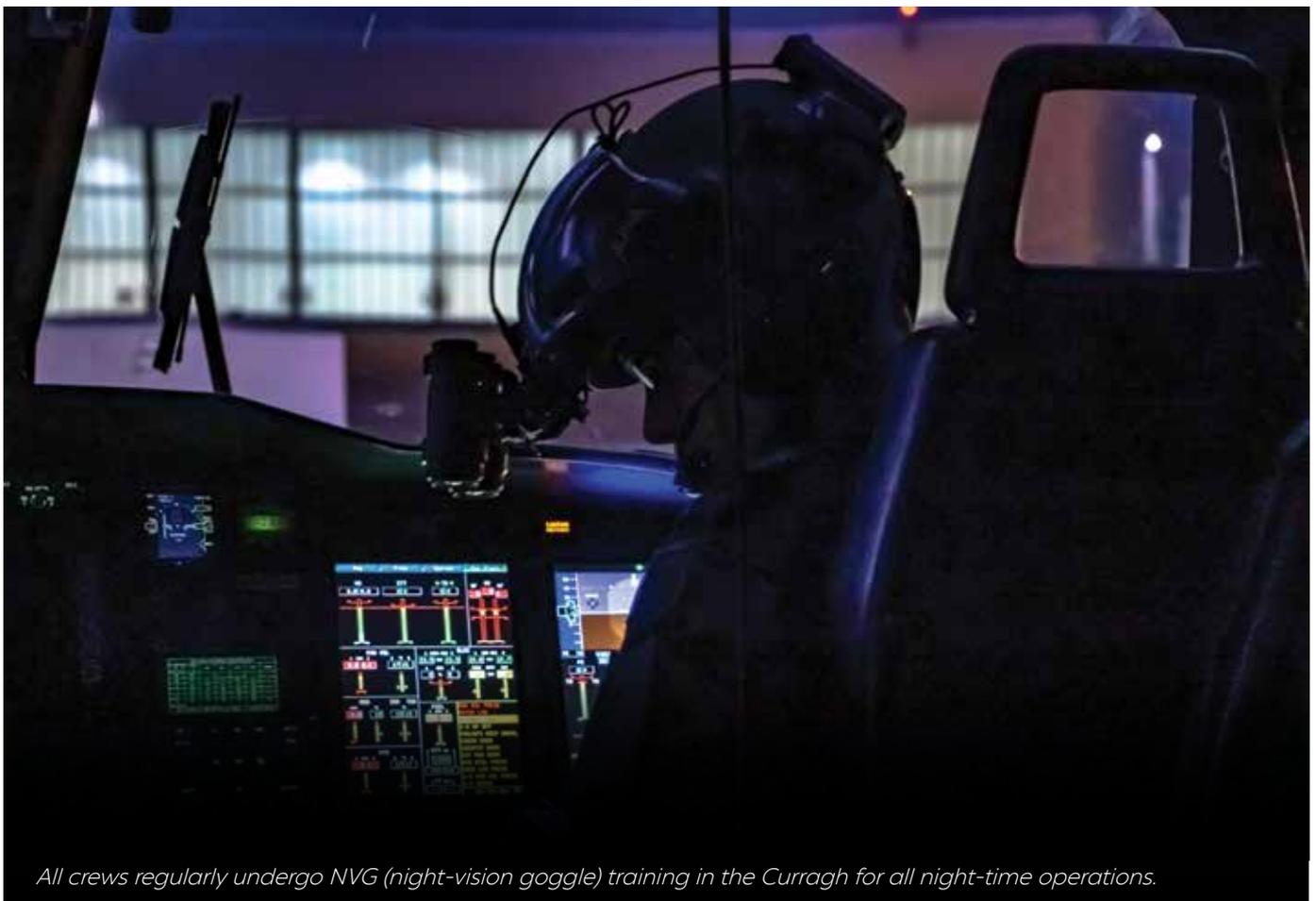
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ABOUT THE AUTHOR

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All crews regularly undergo NVG (night-vision goggle) training in the Curragh for all night-time operations.