

Police Aviation News

©Police Aviation Research

Issue 320

December 2022



Merry Christmas Everyone



FROM THE INVENTORS OF THE CHURCHILL NAVIGATION ARS

M2 EO/IR MULTI-SENSOR SYSTEM

M2 SYSTEM HIGHLIGHTS

- » Unique 6-axis design provides outstanding stabilization with no "gimbal-lock" and level horizon
- » Embedded next generation Augmented Reality System provides unsurpassed situational awareness
- » Fully automated for hands-free following of vehicles, roads, railways, and other data objects
- » Advanced Image Blending combines color and thermal sensors into one information-rich scene
- » Real-time Anti-Turbulence Filter extends viewing distance in hot and humid conditions
- » Innovative software-defined features such as "ViewHold" to adjust zoom optics while maneuvering

APPLICATIONS

- » Law Enforcement
- » Search & Rescue
- » Border Security
- » Maritime Interdiction
- » Fire Fighting
- » Disaster Response
- » Environmental Monitoring

UNRIVALED SUPPORT AND WARRANTY
1 YEAR, 100% MONEY-BACK GUARANTEE

**SHOT
OVER**

OFFERING A FULL SUITE OF GIMBAL AND SOFTWARE SOLUTIONS



ARS



EARTHSCAPE



ION



K1



F1



M1



M2



B1



G1

SHOTOVER.COM

+1 720 680-2457 info@shotover.com

EDITORIAL

The more we research into the numbers relating to the costs of activities relating to the avalanche of migrants crossing the English Channel the more it seems that officials are being economic with the truth. Except perhaps the new Home Secretary, Suella Braverman, she declared that the arrivals were tantamount to an “invasion” and half of Whitehall came over all unnecessary. So easily upset by mere words, shocked by speech approaching straight talk, so rare in politics.

Last month this magazine reported on the facts given to the Home Office Select Committee late in October. As the days passed it became increasingly clear that some strange accounting was taking place. Something major was being held back and that was “*the truth, the whole truth and nothing but the truth. So, help me God*”. Again, people being very economical with their words.

Coincidentally, the UK Defence Journal published a report which highlighted the real cost of rolling out surveillance technology to spot migrants crossing the English Channel, including the small Tekever drones that were included in the evidence to the Home Affairs Committee by Mr Dan O’Mahoney, the Home Office Channel Threat Commander.

Mr O’Mahoney stated, in his evidence, that patrolling the English Channel, inclusive of the contribution made by the Royal Navy, was costing the UK taxpayer £50M per annum. This significant sum contrasted with the report which specified a much larger figure, £1billion, for surveillance technology over 5 years, or £200M per year, four times the figure given to the Committee by Mr O’Mahoney for only part of the resources committed. So, is it £50M, or £200M per annum plus the cost of Border Force vessels, Royal Navy warships and RNLI lifeboats? An economy of words, and Dan is not supposed to sound like a politician.

To add to this, we were recently informed that hotel accommodation, for migrants, is costing £2.4billion per annum and that substantial sums are being given to France to persuade them to help out. It seems no-one is counting all the elements of this huge bill and including them in one presentation of the facts.

Whichever way you view this there is a massive gap between the quoted figure of £50M and the actual cost of this breach of the borders that hovers around £3-4 billion. If all 40,000 arrived on the same day, it would certainly be called an invasion and hopefully blown out of the water. Because they arrive at the rate of a few hundred each time they get tea, cakes and a hotel room supplied.

Beyond that this highlights the lie that is the supposedly “cheap and cheerful” option of using drones in place of manned aircraft. The National Police Air Service is struggling to find funding to replace its two-dozen aircraft, a programme that might eventually require perhaps £200M and yet here we are with just two limited capability Tekever aircraft for four times that amount. Still no-words yet on what the perfect UK police BVLOS machine will look like, whether it will have one engine or two, and here in the Tekever is the nearest thing to what it *might* amount to coming in at a massive cost. Words fail me. Research, research, research.is clearly not an activity familiar to the likes of police chiefs.

Bryn Elliott



COVER IMAGE: Air Zermatt AG is a Swiss company based in Zermatt. The company has an office at the Aéroport de Sion in the canton of Valais and bases in Gampel, Raron and Zermatt. Air Zermatt was founded in 1965. Its fleet includes ultra-modern helicopters, individually equipped according to use. Modern mountain rescue owes its existence to Air Zermatt. Equipment and techniques such as ongligne (rescues from cliff faces) and tripod (rescues from glacier crevasses) were developed and refined by them.

Police Aviation News is published monthly by **POLICE AVIATION RESEARCH**,
7 Windmill Close, Honey Lane, Waltham Abbey, Essex EN9 3BQ UK.
Contacts: **Cell:** +44 7778 296650 **Skype:** BrynElliott or +44 20 8144 1914
E-mail: editor@policeaviationnews.com and policeaviation@hotmail.com

*Police Aviation Research Airborne Public Safety Association Member since
1994—Corporate Member since 2014*

Merry Christmas Everyone

SPONSORS

Anodyne Electronice
Teledyne FLIR Systems
L3 Harris/Wescam
Shotover
Trakka Systems



www.aem-corp.com

www.flir.com

www.l3harris.com

www.shotover.com

www.trakkasystems.com

LAW ENFORCEMENT

INDIA

KASHMIR: Jammu and Kashmir Police has invited bids from registered aviation companies for renting helicopters to provide them with mobility.

Flight operations are primarily about transportation rather than direct, active, crime fighting. The requirement is mainly for carrying police officers and central armed paramilitary force (CAPF) officials. Operation will be limited mainly to daylight and good weather.

The police tender request is aimed at registered aviation companies having a fleet of minimum three air-worthy light twin helicopters and located in Jammu and Kashmir throughout the period January 16, 2023, to January 16, 2026. Only one light twin helicopter is expected to be located with the police, the other two are to ensure the availability of a backup and one in maintenance.

ITALY

NATIONAL: A contract for twenty Leonardo AW119Kx Koala helicopters for the para military Carabinieri air service was signed in late October.

The helicopters, to perform support and training services, are expected to be delivered in the 2023-2026 timeframe. They will perform a wide range of missions supporting homeland security, communities and environmental activities. They will complement the Carabinieri's helicopter fleet and support their new AW139s and AW169s helicopters. They will undertake a range of patrol and reconnaissance tasks over land, identifying critical targets, gathering investigation evidence, as well as supporting ground units' activities. Other duties also comprise environment monitoring and protection, and, if asked by National Disaster Relief Authority, firefighting in addition to rescue missions.

The aircraft will be assembled at Leonardo's Vergiate facility (Varese). The contract also includes a comprehensive turnkey logistics support package and training services for pilots and maintenance technicians. The AW119Kxs feature digital technology, a Garmin G1000H cockpit featuring wide colour screens, synthetic vision, HTAWS, satellite navigation/moving map, which increases operational effectiveness and lowers operating costs. The helicopters will be used at the existing locations of the service, which includes 18 bases across the country. Their equipment will allow full interoperability with other Carabinieri's assets and full cooperation with those of other armed forces and government agencies, both in-country and internationally. [Leonardo]

Editor: More than 490 AW119s have been sold to date. It is not a massive number, but the type has polarised opinion among the emergency services, you either love it or hate it. In law enforcement they type gets to the scene quickly, but it suffers from vibration when at low speed, and in a tight circuit, all of which ultimately tends to hamper the capability of the human and mechanical sensors. Other operational flight experiences reflect a failure of the assessing customers to fully research flight characteristics. One well

known fleet operator moved to the AW119 from the Bell 206 and the crews were shocked to find that a massive difference in recovery characteristics between the two blade Bell and the four blades of the Italian design. The crews were greatly relieved to return to the Bell product.



POLICE AIR WING: Recently seen at the Airbus facility of Donauwörth, in Bavaria, were these two camouflaged H145 helicopters being prepared for delivery to the Omani police customer. D-HADB carries a sensor [Social Media/Johannes Herrmann]

SPAIN

LAW ENFORCEMENT: Airbus has delivered the first two H135s to the Spanish Guardia Civil and National Police under the 36-unit contract signed with the General Directorate for Armaments and Materiel (DGAM) at the end of 2021 to supply the Ministry of Defence and the Ministry of Interior.

The new helicopters will enable the National Police and Guardia Civil to replace MBB Bolkow BO105 helicopters in a wide range of missions including police, surveillance, and rescue activities. In total, the Ministry of Interior will receive 18 units.

The new H135s will join the 31 helicopters that are already operated by the Ministry of the Interior. The H135 has proven to be a much-loved helicopter in Spain, where more than 80 units are already flying all kinds of essential missions for more than 25 years.

As for the Spanish Air Force and Navy, which will receive eleven and seven H135s respectively, deliveries will begin next year and will be added to the 16 helicopters already operated by the Spanish Army for training and support missions for the Military Emergency Unit (UME). From 2023 onwards, the three-armed forces will be able to benefit from synergies in terms of training, operation, and maintenance.

More than 1,350 EC135/H135 helicopters are operated by 300 operators in 64 countries. The fleet has accumulated more than 6 million flight hours. The H135 is the fleet leader in the twin-engine market segment with more than 200 helicopters flying all over the world for law enforcement missions.



TURKS & CAICOS ISLANDS

In answer to a question from the member for Romford who was enquiring what support UK armed forces were offering the Turks & Caicos to help tackle gang-related violence in that territory, the UK Government replied that it is supporting the Turks & Caicos Government to protect the safety and security of people on the islands to help tackle violent crime.

This has included support from UK Police, the National Crime Agency and UK Border Force, as well as a Foreign, Commonwealth & Development Office (FCDO) funded serious crime team which will provide investigative capacity to the local police. In support of this wider Government response, Royal Fleet Auxiliary Tideforce deployed to the islands in October and, with its embarked Wildcat helicopter, provided direct support to local operations. [Hansard 23/11]

Ed: RFA tanker Tideforce, with her embarked Wildcat helicopter from 815 Naval Air Squadron, were on operations supporting aircraft carrier HMS Queen Elizabeth in the North Atlantic when they were diverted to support a request from the Governor of the British Overseas Territory. A violent upsurge in gang-related murders fuelled by drugs, weapons and turf-wars had created an unprecedented security situation. The Wildcat helicopter was able to use its array of sensors to conduct persistent surveillance and reconnaissance of a predetermined area chosen by the local policing effort. The idyllic Caribbean islands find themselves in the direct line of illegal gang, drugs, weapons, migrant and fishery exploitation activities. Tideforce remains on notice in the Caribbean while she works with Royal Navy partners in the US Navy and Military Sealift Command. She completes her deployment and returns to the UK this month.



EVOLVING EO/IR TECHNOLOGY FOR ADVANCED MISSIONS

Supporting global airborne law enforcement agencies with 45 years of product evolution and flight-proven technologies.

Missions are longer, more complex and need to be executed faster. More is expected of you and your crew each and every time you fly. L3Harris' electro-optical and infrared systems are designed with the latest technologies to address changing mission requirements. Delivering robust performance and ease-of-use, WESCAM MX™ sensor systems enable operators to see more, operate easier and analyze live video intelligence with confidence. When minutes count, trust WESCAM MX systems to help you see first and act first.



UNITED KINGDOM

NPAS: Here we are again approaching another year end. Faced with total confusion over who or what is to control them into the future, their purpose and forward planning, the controlling board had their last meeting in late October. Despite the apparent urgency of the situation, they are not scheduled to have their next meeting until January. Despite several assurances to several public bodies, no minutes of their reportedly chaotic deliberations have been published through 2022. The promised missing Annual Reports, again the subject of assurances to a respected public watchdog, remain unpublished. There is undoubtedly no-one capable of writing them in the service anymore.



West Yorkshire has declared they no longer wish to be in charge of NPAS, unfortunately although the rules allow them to do that, they also say they cannot divest themselves of their bastard child until some organisation agrees to adopt it. There are no prospective foster parents. Who, knowing the rules, would volunteer at this juncture?

Over the last decade it appears that the Home Office has provided a modest annual funding stream of around £10M pa and yet not one helicopter has been replaced in this time. There have been projects, and fixed wing was one of them, but each has been served up with lethargy and a total lack of plan. There was far more enthusiasm for cancelling and that includes both the MD902 fleet and the fixed wing, than moving anything forward.

Even the potential success stories, the large new multi-aircraft bases at Doncaster and North Weald, have turned to dust. One having to be abandoned and the other serving as the base only for a single helicopter. The latest project is drones and the mythical BVLOS and yet the organisation has never ever owned or operated an unmanned craft in its time. As a result, there is no viable plan for drones of any kind. All projects, whether viable or just daydreams over a coffee have insufficient funding in place. It appears that nothing has a future. From the recent guidance provided to the Home Office by the Migrant Crises in the English Channel the cost of finding and developing a drone potentially suitable for a BVLOS mission is so high that NPAS should totally abandon the project immediately.

There are signs that some forces in the Midlands are thoroughly fed up with the whole situation and vetoing transfers of volunteers to NPAS. This is just part of the challenging staffing set up and retention at the moment.

NPAS is broken, probably terminally, and the only potential escape route is to end its life and dismantle everything so that in time individual police forces can cherry pick the constituent parts. From this, perhaps, each might go back in time and create their own wholly independent and disconnected air support unit. In future they might learn to work together and create consortiums able to support each other and get the best price for their service needs. That is until some idiot emerges that wants to put all the small units together to create an national police service. Who would do such a thing?

DONCASTER: The airline traffic using the airport at Doncaster Sheffield (Robin Hood Airport to some) closed a few days into November with the 'final' closure date affecting other flying tenants being November 18. Two weeks prior that there was news that a Middle Eastern Consortium were offering to buy the airport, to the chagrin of local employment unions, Peel regularly denied any such talks were taking place.

The Peel Group seem to have it in for airborne emergence services as a whole. At both Sheffield Airport and DSA, they were happy enough to enter into contracts with the Yorkshire Air Ambulance, South Yorkshire Police, NPAS and 2Excel but then equally happy to pull the rug from under each of the deals when it suited them. Litigation beckons.

So where have the NPAS fixed wing aircraft gone? As announced in mid-November it was to Leeds Bradford Airport (LBA). As the UK's highest airport, 681 feet above sea level, it can demonstrate some of the worst weather overall, not only that, but the runway isn't aligned with the prevailing wind meaning that most take-offs and landings have to contend with some sort of crosswind. Whoever made that decision either wasn't a pilot or was given no choice in the current situation where beggars cannot be choosers. They are probably there for the next year.



NPAS Chief Operating Officer and Accountable Manager Chief Supt Vicki White said: "Termination of our lease at Doncaster Sheffield Airport was very much against our wishes.

"We are doing all we can to minimise disruption as we move operations temporarily to Leeds Bradford Airport.

"We expect that all the extra costs created by the early termination of our lease will be met by Doncaster Sheffield Airport."

Currently, a Base Manager, six Tactical Flight Officers and four pilots are notionally employed in the fixed wing team. Apparently, they will all relocate to the temporary Leeds base with adjustments being made to their current travel arrangements. Perhaps. There are plans to recruit additional pilots in the future.

Arrangements have been put in place for planned engineering on the fixed wing aircraft to be carried out, when required, at LBA and also at Bournemouth Airport (BOH).

In the longer term we can assume that NPAS will be compensated by Peel for now having a hangar they cannot use on the now non-flying DSA but that will potentially take a long time to feed through.

As reported under Search and Rescue heading later in this edition 2Excel Aviation has also been obliged to send 18 of its aircraft fleet to new bases following Peel Group's decision to close the airport. The bases are temporarily Humberside and Teesside airports. It is noteworthy that they, as professional aviators, 2Excel did not select Leeds Bradford!

2Excel will retain its premises in DSA's Hangar 3, with ground-based support roles such as continuing airworthiness, procurement, design engineering, safety and operations continuing to be based there for the foreseeable future.

Meanwhile, the local authority is looking to take Peel Holdings to court over the issue.

UNITED STATES

NATIONAL: In August 2020, Jon Gray, a police helicopter pilot in Southern California, created the Hangar Z Podcast, the first and only podcast dedicated to promoting and exploring the personnel and equipment behind the missions of public safety aviation. In November 2020, Jeff Ratkovich, a former Southern California police helicopter pilot and current EMS helicopter pilot in Tennessee, joined forces with Jon as co-host.

The Hangar Z Podcast interviews are truly international fare and are focused on the people filling all the various roles within the aerial firefighting, search & rescue, EMS, and law enforcement sectors. Interviews with pilots, tactical flight officers, flight nurses & paramedics, and of course the backbones of any aviation unit operation, the aircraft maintenance technicians! You will find informative interviews from figures from Australia to the Arctic, each offering a different perspective on a common world of the airborne emergency services industry.

<https://www.hangarzpodcast.com>





CALIFORNIA: The November 12 American Heroes gathering of rotary wing airborne emergency services units at Hansen Dam Recreation & Sports Complex, Los Angeles was again a great success.

The free public event offered helicopters from law enforcement, fire, EMS, military / DOJ and homeland security organizations, Career & Recruiting Expo, local Search & Rescue teams, equipment displays, demos and family outdoor safety tactics, animal rescue and emergency / disaster preparedness.

GEORGIA: The city council of Atlanta, Georgia, has approved the purchase of two new police helicopters, and the upgrading of a third. The purchases – for two MD 530F helicopters, as well as for the refurbishment of an existing MD500E helicopter built in 2001 – were approved by the council November 21. They have now been sent to Atlanta Mayor Andre Dickens to be signed off.

The acquisitions, covering all three aircraft and all necessary equipment, is expected to total just over US\$10.4M. The decision was prompted by information that the helicopters were available to purchase following the cancellation of an order.

The Atlanta PD aviation unit operates a mixed fleet of MD/Hughes and Bell helicopters around 50 years old, composed of units from three separate manufacturers. The purchase will lower the age of the helicopter fleet and standardise to a single manufacturer – reducing maintenance costs and timescales. [AirMed/Fox]

ILLINOIS: In November funding was approved for a helicopter to operate in support of Cook County Sheriff's Office. The authorized funding aims to help "combat the violent crime plaguing our community, assist in large-scale emergency situations, and help locate missing people," the sheriff's office said. Sheriff Tom Dart said Chicago police and the sheriff's office currently share two Bell helicopters that are often out of service and weather limited. One dates from 1994 and the other 2006.

\$11.4M are being allocated for the new role equipped helicopter and equipment. The money is from reserves that will be carried forward from funds unutilized in the current fiscal year and a \$2.5M federal Urban Areas Security Initiative grant.

Cook County is among the largest metropolitan areas in the USA. It is the most populous county in the U.S. state of Illinois and the second-most-populous county in the United States, after Los Angeles County, California. More than 40% of all residents of Illinois live within Cook County – the 2020 population was 5,275,541.

It is yet to be determined whether Cook County are cost for leasing or purchasing the as yet unidentified helicopter type, but they hope to have it operational by late summer or early fall of 2023.

APSA TRAINING
On-The-Road

AIRBORNE THERMOGRAPHER
CERTIFICATION COURSE
TAMPA, FL | DECEMBER 5-7, 2022

OHIO: Last month the police department of Columbus, Ohio decided to sell a Bell 407GX helicopter N552CP, c/n 54906, it agreed to purchase in November 2019 but never put into operational service. After the new helicopter had been around for over a year (delivery was late 2020), late in 2021 the city council of Columbus, agreed a sum of US\$671,000 to upgrade the \$3.4M helicopter with additional role equipment technology including a \$473,000-thermal imaging camera, computer systems and searchlight to enable it to undertake the police role. Normally the equipment would simply be transferred from one of the earlier fleet of MDs, but it was mostly incompatible.

Plans have now changed, and the main fleet is to remain with the MD 500s which were rebuilt as MD 530/369FF a few years ago. After the defund the police campaigning under BLM the police agreed to reduce the number of MD helicopters it held to four, the reason was said at the time to mainly relate to noise reduction. The 2007 MD369FF N558CP was disposed of. The Bell 407 went against that agreement in that the fleet remained at five.

TENNESSEE: On November 14 the Metro Nashville Police Department unveiled the first of its two new \$6M new Airbus Helicopters H125 helicopters, N849NP, at Public Square Park to Mayor John Cooper. The helicopters are 2022 models and represent a 50-year upgrade to the 1970s OH-58 helicopters the department has been flying to date. Spare parts for the old fleet have been a growing problem.

The helicopter was assembled in Mississippi and painted in Louisiana. It features the badge of fallen officer Eric Mumaw, who died on duty in February 2017. The next helicopter will arrive on December 19. This helicopter will feature the badge of Officer John Anderson, who died in July 2019 on duty. It will have a different identification number but will be otherwise exactly the same.

MNPD helicopters fly around 2,000 hours a year. They have a hoist system, an updated communications system that can listen to five radios at once instead of only two, GPS, an autopilot in case of emergencies, a PA system, an infrared camera, a spotlight and a downlink.



**TELEDYNE
FLIR**

Teledyne FLIR
Defense

LONG RANGE CLARITY

The Star SAFIRE® 380-HDc delivers unparalleled stabilized HD multi-spectral imaging in a compact, low-profile package. It's designed to maximize ground clearance in rotary aircraft without sacrificing capability and performance. With 2x-4x greater magnification than other lightweight systems in its class, the Star SAFIRE 380-HDc is the obvious choice for a variety of missions.

LEARN MORE AT [FLIR.COM/PAN22](https://www.flir.com/PAN22)

AIR AMBULANCE

Business aviation operations faced protests by environmental campaigners in multiple locations across Europe this week, with facilities in the UK, Italy, Germany, and the Netherlands targeted. Groups including Extinction Rebellion, Scientist Rebellion, and Last Generation targeted private terminals and FBOs in a coordinated protest to coincide with the start of the COP27 climate change conference in Egypt. The groups are demanding a complete ban on private jets and high taxes on airline frequent flyers.

In the UK, protesters tried to blockade the entrances to Farnborough Airport and the Harrods Aviation FBO at London Luton Airport. Similar protests were also staged at Milan Linate Airport, and on November 5, around 500 Dutch members of Greenpeace rode bicycles into the business aviation enclave at Amsterdam Schiphol Airport and blocked aircraft from being moved.

EBAA condemned the protest at Schiphol, reporting via a LinkedIn post that the demonstration resulted in flights being cancelled and that one medical flight had to be diverted. "Our sector flies up to 70 medical flights a day, which saves lives when not disrupted," said the group. At least one aircraft was damaged during the protest, according to an EBAA member operator. [AIN]

KUWAIT

MINISTRY OF HEALTH: Bell recently delivered a 429 into the Kingdom of Kuwait. The delivery was to the Kuwait International Aircraft Leasing (KIAL), and it will be used by the Ministry of Health (MOH) for Helicopter Emergency Medical Services (HEMS). This marks the third 429 HEMS delivery in the country.



NEW ZEALAND

BAY OF PLENTY: The Bay of Plenty is a region of New Zealand, situated around a bight of the same name in the northern coast of the North Island. The bight stretches 260 km from the Coromandel Peninsula in the west to Cape Runaway in the east. The region's rescue helicopter has a new name after local company Aerocool Developments Ltd recently become a major partner.

Formerly known as the TECT Rescue Helicopter the BK117B2 ZK-HES it will now be known as the Aerocool Rescue Helicopter.

Aerocool Developments Ltd, a company with its origins in the kiwi fruit growing industry, have committed to a full four-year term of support with first right of renewal. This gives the Aerocool Rescue Helicopter a level of comfort and certainty to continue providing this life-saving service to the community, the statement said.

UNITED KINGDOM

WALES: Gama Aviation Plc, the global aviation services provider, is pleased to announce it has been selected as the preferred bidder for the Wales Air Ambulance Charity contract ("Charity") for the operation and maintenance of four Medium Size Helicopters. The selection was made by the Charity's Trustees after an extensive 16-month procurement process. The Group is now working diligently to agree the final details of the contract with the Charity over the next two months. Operated by the Group's Special Mission Strategic Business Unit ("SBU") the 7-year agreement is expected to commence on 1st January 2024. Whilst there can be no guarantee that the contract will be concluded, any award would see the air ambulance rotary aircraft fleet more than double in size, underlining the significance of this multi aircraft, long term contract, to the Group. Mark Smith, Managing Director, Special Mission, commented:

"We are both proud and honoured to have been selected as the preferred bidder for this strategically sig-

nificant contract after a hard-fought competition for a nationally important air ambulance contract. The Special Mission SBU will be working closely with the Charity over the coming weeks and months to agree final terms and I look forward to the opportunity of working with Wales Air Ambulance Charity over the coming years

FIRE

MONTENEGRO

AIR FORCE: The Montenegro Air Force undertakes fighting wildfires in the country using the three Bell 412 Epi it operates.



Every July, wildfires sweep through Montenegro's forestland, destroying endangered terrain and threatening people's lives. More than half of Montenegro's ecosystem consists of vast woodland and mountains, the need for a reliable aircraft to help combat severe wildfires is imperative. As the only active in-country operator with aerial firefighting capabilities, the Montenegro Air Force heavily depends on their three Bells to navigate in challenging conditions throughout the country. Over this past year, the Air Force spent more than 200,000 flight hours on firefighting operations.

During a wildfire outbreak in the Kučke Mountains in March 2022, the crews were faced with two weeks in below zero degrees in high and low mountains with the closest water source for picking up their 1,500 litres being a frozen lake.

UNITED STATES

CALIFORNIA: Rain Industries, based in Alameda California has announced their next-generation autonomous firefighting demonstrator aircraft: the Rain MK2. It is an uncrewed aircraft system (UAS) based on a proven helicopter airframe used to demonstrate rapid initial wildfire response and containment.

The demonstrator carries approximately 30 gallons of payload and is designed to fly for over an hour with a 23-mile response radius. The demonstrator aircraft will be deployed with fire agency development partners in a limited capacity to formulate requirements for a full-scale deployment.



The launch of the demonstrator is the culmination of 18 months of research and development efforts and is a major step towards a goal of eliminating catastrophic wildfires by catching them early.



CRITICAL VISION TECHNOLOGY
To see, to save and protect

TOTAL SOLUTIONS PACKAGE



TrakkaCam® TC-300

High performance cost-effective surveillance system, 4-axis gyrostabilised, available with a full suite of 7 payload options (HDIR, HDTV, LRF, LP, LI, A/T, IMU/GPS), Lightweight/compact single LRU design, ITAR-free



TrakkaMaps® TM-100

Mapping & Recording Video Management System, Multi map views with augmented reality, Integration with open and proprietary user databases, Intuitive control and innovative post-processing



TrakkaBeam® TLX

High performance searchlight with superior beam quality, Lower power draw, Internal multispectral filters, optional new dual EO/IR sensors for full situational awareness

trakkasystems.com



Parapex Media

Marketing, Social Media Management, Website Design, Press and PR
dedicated to the Aviation Industry

www.ParapexMedia.com

SEARCH & RESCUE

GREECE

COAST GUARD: On the recommendation of EASA, the European Union Aviation Safety Agency, the Greek civilian aviation authority has for the first time issued a permit allowing IAI's Heron 1 UAV to be flown in Greece's airspace.

The permit allows the system to be used in the operational activities of the European Border and Coast Guard Agency, whose charter is to provide marine surveillance and coastal protection. The UAV flights are carried out in Europe's civil airspace according to civil flight procedures with no military control.

The Heron 1 systems are equipped with EO/IR and surveillance radars that provide an up-to-date, intelligence picture. This information is then distributed to decision-makers in situation rooms by means of a specialized system that ensures the smooth coordination, planning, and command of the various tasks and assignments.

NETHERLANDS



DEN HELDER: On 3 November 2022, the Kustwacht (NLCG, Netherlands Coastguard) officially received two new aircraft and two helicopters. In a ceremony at Amsterdam-Schiphol airport, the aircraft and helicopters were handed over to the Director of the NLCG.

The following day Bristow Group Inc. embarked on a new 10-year relationship with the Netherlands Coastguard, delivering critical helicopter SAR operations for people and communities across the country through its affiliate, Bristow Netherlands B.V.

At 1 p.m. Central European Time on November 4, 2022, two new custom-designed SAR bases officially went on-line at Den Helder and Midden Zeeland Airports, where specialist Bristow teams with SAR-configured helicopters now stand ready to respond to emergency events and critical government taskings in all weather, day and night.

Each new base is home to a winch equipped AW189 helicopter and is staffed by experienced engineers



and ground support teams. Bristow will also provide an additional back-up aircraft, ensuring continuity of this lifesaving service.

The aircraft – crewed by two pilots as well as specialist winch operators and a SAR nurse – also feature custom-designed ergonomic medical stations, giving the SAR nurse the right facilities to provide urgent medical care during flight.



Bristow will also introduce new technologies such as mission management and data-link systems, ensuring ever-closer collaboration with other government services and assets and an increasingly effective SAR service for the Netherlands.

As well as responding to emergencies, the new SAR teams, who are tasked by the Joint Rescue Coordination Centre in Den Helder, are also trained and prepared to support the Netherlands Coastguard with other duties, such as the aftermath of disasters, incidents, and transporting the Maritime Incident Response Group (MIRG). www.bristowgroup.com.

The AOC was issued by the Netherlands CAA for a new, fully SAR configured AW189 PH-SAR (c/n 89015). This was greeted at its new home to a traditional welcome by the fire service. It joined PH-NCG (c/n 92001) at Den Helder airport – one of the two bases Bristow will operate from. The third AW189 is PH-BSR. The previous fleet provided by Noordzee Helicopters Vlaanderen (NHV) was a pair of yellow AS365 Dauphin helicopters.

The fixed wing element of the Netherlands Coastguard has also switched from operating its Schiphol, Amsterdam based Dornier 228 aircraft to the new fleet of two modified Bombardier DHC-8-102MPA Dash 8 patrol aircraft are flown and maintained by a civil consortium, ISR Support Europe, operating the aircraft in cooperation with Coastguard crews from the same hangar at Schiphol airport.

The two are registered PH-CGD (c/n 028) and PH-CGE (c/n 038), they replace the Do228 aircraft, which have been flown and operated by the Koninklijke Luchtmacht (KLu, Royal Netherlands Air Force) 334 squadron until the last operational mission on October 31.

The introduction of the new aircraft provides new technology and marks the end of the direct KLu involvement with the Netherlands Coastguard. The Ministry of Defence continues to support the Coastguard and provides officers to conduct Coastguard tasks on board of its ships and aircraft.

UNITED ARAB EMIRATES

ABU DHABI: The United Arab Emirates National Search and Rescue Centre (NSRC) has selected the Smith Myers ARTEMIS Mobile Phone Detection, Location, and Communication System as the sensor of choice for its Search and Rescue Helicopter Fleet. NSRC undertakes all the assigned tasks in coordination with local and federal authorities in all aid and emergency processes. The Centre implements the international standards and specifications of the devices, equipment, installations, and tools needed for search & rescue and issuing orders and regulations. It also supervises the efforts to develop the response capabilities through preparing and applying methods and exchanging information and expertise with regional and global counterparts.

Late last month the UAE NSRC were hosting the International Search and Rescue conference and exhibition in Abu Dhabi at the National Exhibition Centre. The conference was organised with the guidance of the UAE’s leadership on the importance of preparing for challenges, looking ahead to the future, and harnessing new and advanced technological tools to serve humanity, as well as to support the community and national economy, and ensure the future for the next generations.

They used the venue to formally announce that they have selected the ARTEMIS system for installation across their fleet of SAR helicopters following extensive in-country testing.

HE Major General Dr. Stephen A. Toumajan, General Manager, NSRC (left) with Andrew Munro, director of Smith Myers in front of the NSRC Leonardo AW139 that will deploy Smith Myers ARTEMIS Mobile Phone detection, location, and communication system. Andrew Munro, Company Director at Smith Myers, was attending the conference as a guest speaker.



ADVANCING PUBLIC SAFETY AVIATION

WWW.PUBLICSAFETYAVIATION.ORG

UNITED KINGDOM

COASTGUARD: Faced with the closure of the Doncaster Sheffield Airport base aerospace services company 2Excel Aviation has to new operational bases following Peel Group's decision to close their existing multi-capability base.

The company has swiftly reacted to the closure news, delivering an accelerated movement plan for 18 of its aircraft that previously operated from Doncaster.

After the airport closed, employee-owned 2Excel have retained its premises in DSA's Hangar 3, with ground-based support roles such as continuing airworthiness, procurement, design engineering, safety and operations continuing to be based there for the foreseeable future. The vast hangar, easily capable of housing their Boeing 727s and other smaller craft remains largely unused.

Of the 18 2Excel aircraft on the move, the company's two Boeing 727 aircraft, operated on behalf of Oil Spill Response Ltd in the counter-pollution role, will be based at Teesside Airport. Three King Airs and two Panther variants of the PA-31 Navajo operated on behalf of the UK's Maritime and Coastguard Agency are moved to Humberside, operated by Bristow, along with another Navajo used by OSRL as a spotter aircraft.

Other PA-31s and King Airs used for pilot training and check flights and others operated by the company's Capability Development design engineering, manufacturing and maintenance business unit, which also includes a flight trials operation, will also move to Humberside. A pair of Charter King Airs will on occasions visit Humberside when not out flying customers.

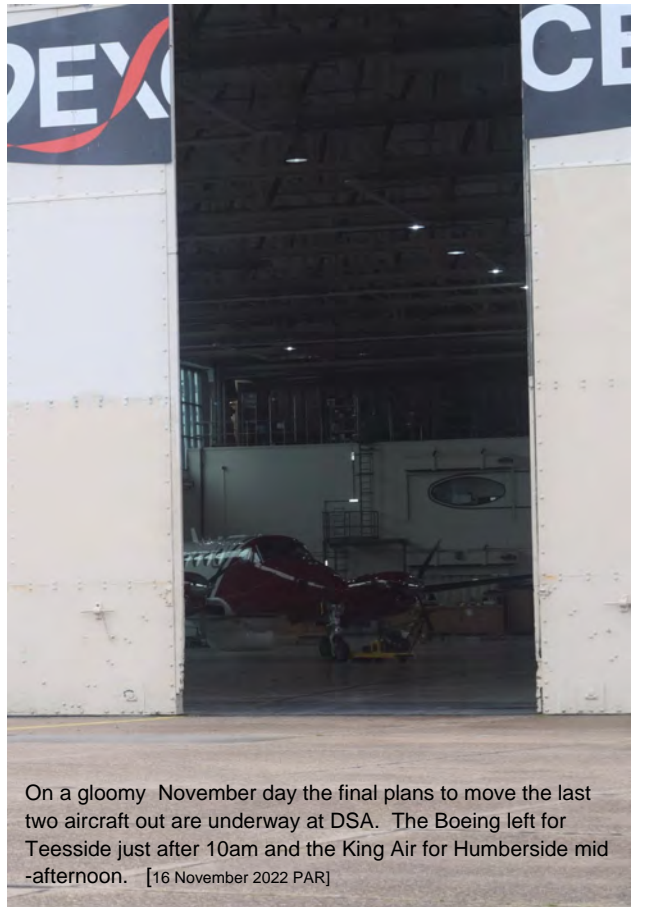
Andy Offer, 2Excel's co-founder and Director, said: "It is a testament to all at 2Excel that since the announcement of Doncaster's closure on 26 September, our employees have worked flat out to react to the news and reconfigure the business, delivering a plan to minimise huge potential disruption in a safe and efficient manner.

"While disappointed that we are being forced to move our operational base away from Doncaster-Sheffield Airport, a place we've been proud to call our home for a decade, we have been overwhelmed by the swift response from across the industry. We know that it is a close-knit community, but the number of offers to help us manage the unexpected transition and to provide temporary basing options have been much appreciated. We've also proved we are agile, flexible and responsive, proceeding at pace to devise a solution.

"Special thanks must go to Humberside and Teesside Airports, where many of our aeroplanes will be based for the first time. The professionalism of these operators and their willingness to accommodate us is much appreciated. They have provided a great welcome at very short notice. And we are happy to be returning several other aircraft to the company's spiritual home at Sywell Aerodrome, where we retain our corporate HQ and where 2Excel started out with The Blades aerobatic team.

"We look forward to working with all those at our new bases who have made us so welcome."

There are many questions unanswered in the statement. In recent months 2Excel have been regularly advertising for additional staff for Doncaster and certainly many of those will have been taken on before



On a gloomy November day the final plans to move the last two aircraft out are underway at DSA. The Boeing left for Teesside just after 10am and the King Air for Humberside mid-afternoon. [16 November 2022 PAR]

the current situation was revealed. Many of the staff at Hangar 3, both old and new, may not be in a position to relocate permanently to the new bases. Although Humberside Airport, owned by Bristow, is only 40 miles away by road, the journey to Teesside Airport is 90 miles. The company has yet to decide where their long-term future lies but meanwhile they still advertise for staff in Doncaster.

There are rumours of a potential new owner from the Middle East, of the local authorities taking Peel to court but neither of these is expected to amount to anything of a quick fix. The longer that 2Excel (and NPAS) stay away at another base the case for considering a return diminishes.



With only two days to spare before closure even the NPAS hangar was a hive of activity as the move to Leeds Bradford went ahead. [16 November 2022 PAR]

SOUTH: Last month PAN reported on the presentation that the English Channel Tsar, Dan O'Mahoney, gave to a Home Affairs Committee but at the same time contrasted that with new information on the real cost of deterring the boat traffic across the English Channel before and since.


Much has happened since then with new revelations in the real costs involved and the reappearance of Suella Braverman in post as Home Secretary. She said what she saw, and many other politicians appeared to take real or sham offence at the words used.

To give O'Mahoney the benefit of the doubt, he probably believed that the operation in the English Channel cost as little as £50million per annum. They were his direct operating costs but took no account of the research, development and infrastructure costs. No one expected him to take account of the cost of the public roads he was driving over but it appears he appears to have dismissed some important items.

These included:

The full, annual cost of acquiring the five crew transfer vessels (CTVs) based at Ramsgate.
Border Force cutters,
coastal patrol vessels
rigid inflatable boats

The Ministry of Defence assets include the full, annual cost of the River-class offshore patrol vessel, the flotilla of up to 6 P2000 Archer-class fast patrol vessels, three RHIBs currently based at Ramsgate, and a Leonardo Wildcat helicopter not previously reported but referred to by Mr O'Mahoney and in Parliament last month. Some 80 personnel are assigned to the tasks. There were sorties by RAF Beechcraft Shadow R1, the grossly oversized Airbus Atlas transport aircraft and the more understandable Boeing Poseidon maritime patrol aircraft and even others by high end military drones including Watchkeeper and Guardian but none of those appear to have been added to the public account, the price is either buried deeply in the accounts or simply put down to good will. Such "Aid to the Civil Power" rarely comes free but there is always first time.



People Solutions

- Transformation Management
- Crew Resource Management
- Organisational Development
- Psychometrics
- Talent Management
- Coaching
- Facilitation

'Helping you to realise and release the talent potential that sits within your organisation, developing your people and ensuring that you safely thrive and fly'

David Howell, Director

www.ableandrush.com

The Department for Transport budget might encompass the Coastguard assigned Leonardo AW189 search and rescue helicopter based at Lydd, the Beechcraft King Air and the Piper Navajo fixed-wing patrol aircraft, formerly based at Doncaster and used to patrol the English Channel to locate, track and report small boats carrying migrants from the beaches of northern France to the English coast in East Sussex and Kent but that is a cost that should be counted as part of the Migrant problem.

There have been several drones used over the English Channel, including those full specification military types but the Tekever AR5 based at Lydd and the Tekever AR3A that operates from the Coastguard Rescue Centre at Dover, are used for Channel surveillance and should therefore be taken account of. The independent report claims that no less than £1 billion pounds was injected into the Tekever craft. When they started their contract from Lydd the first deal was just £8M for four months. The economical trading did not last for long as UK officials apparently went blind on spending on the otherwise successful craft. It appears that the twin-engine toy aeroplane was embraced by the men at the ministry and dragged into the real world. There were trials and tribulations, and indeed a near miss on losing one of the drones at Lydd when both engines failed. Nonetheless they prevailed and appear to have produced a now capable craft. Unfortunately, although it was costing far less than a military drone, the beast cost an unsustainable amount over four years. The contract was set to end on September 30 but was extended to November 30, 2022. For only two toy aircraft that seems quite a lot of money. Seemingly some 55,000 times the contract price of the two manned aircraft supplied in the same role by 2Excel. That 2Excel deal fortunately did not come with an open-ended and unwritten development contract. The unexpected rise in use and costs has been the subject of supplementary contract charges—but they are small amounts compared to the Tekever.

Let us not forget the large sums of money transferred to the French government to improve security of the beaches of northern France, reported to be £54M but as ever the subject of negotiation.

A new the land-based network of surveillance towers was mentioned by O'Mahoney but the significant £2M cost paid out to Swedish company Kongsberg Norcontrol Limited was clearly also not a factor he included in the £50M.

It is uncertain who is responsible for operating a Diamond DA62 surveillance aircraft, owned by North Sea Aviation, based in Ostend and operating from Lydd, in Kent, for Channel surveillance. There is no public accountancy for which organisation is paying that bill. The fact that it is Belgian registered probably allows it to fly over the mainland Europe coastline where British aircraft would be an embarrassment, but no explanation of that has been offered.

Land based facilities include the now infamous migrant reception centres at Dover and at Manston, much in the news but not having a separate cost figure in the public domain.

The financial and logistical contribution of the Royal National Lifeboat Institution has never been specified, let alone costed. The charity that 'saves lives at sea', does so freely and is busy. The lifeboats at Dover, Dungeness and at Ramsgate, are requested, by HM Coastguard, to assist the Border Force on a regular basis to 'rescue' migrants, who pay large sums for a passage across the Channel in inflatable boats which have been described by the National Crime Agency as 'death traps' but are not charged additional fees for their rescue.



In amongst the spend on migrants is a list of technology invoices that amount to around £1.5 billion but, as listed above, do not take into consideration a whole host of other items.

To sum up the big spend on coastal patrol was for the Tekever drones, that is followed by the almost insignificant £42M paid to Bristow for the supply of the Coastguard SAR contract across the whole of the UK and another smaller sum, £18.33M to 2Excel Aviation for their fixed wing aircraft. The £1.982M for Kongsberg and £0.94M to Elbit are almost pocket change in comparison.

Tellingly, one of the reports outlining the money already spent on deterring the migrants claims that Home Office agencies are reportedly planning to spend an additional £385M on drones, patrol boats, and biometric solutions by the end of this year to target people attempting to cross the English Channel.

In a move that will gladden many, on November 8 a heavily guarded deportation flight carrying 22 Albanian criminals and illegal migrants left the UK at dawn on a secret flight to Tirana. It was personally authorised by the new Home Secretary Suella Braverman in a bid to deter ever more Albanians from slipping into Britain by crossing the Channel in small boats from France. Tellingly there is no word it has been repeated.

Most of the deportees were delivered in secure vans to the waiting plane from closed deportation centres where they had been held as convicted criminals or for entering Britain clandestinely by sea as economic migrants rather than asylum seekers. [Daily Mail/PAR]

A new agreement has been set up and funded with the French. It brings greater numbers of police patrols on the beaches but a new tactic looks set to thwart that plan. After intercepting and destroying many of the boats before they reached the waterline a new tactic is for would be migrants being met at the waterline by the boats. The current rules do not allow interception at sea so the situation seems to lie in favour of the boat people. [PAN/TC]

ROYAL AIR FORCE: The truth behind the recent comment in PAN on the inability of the much-denuded RAF Maritime Patrol aircraft to undertake Search and Rescue has been clarified by the Ministry of Defence.

As was already apparent, the Boeing P8 Poseidon MRA1 maritime patrol aircraft is not cleared to drop Lindholme Gear, also known as Air Sea Rescue Apparatus (ASRA) consisting of a multi-seat life raft with supply containers joined together with a buoyant rope. Instead, it is to be equipped with the UNI-PAC III air sea rescue apparatus with the release to service expected early in 2023. Until then the Lindholme Gear can be deployed by the A400M aircraft.

The decision to cancel the all-British Nimrod MRA4 continues to impinge on the UK SAR capability after many years without any dedicated aircraft for the task. The new maritime patrol aircraft, the Boeing Poseidon, is a type that cannot be refuelled by RAF tankers (as it does not have the RAF favoured probe and drogue system), cannot carry British torpedoes and cannot drop British sea survival equipment. Furthermore it will not have the option of dropping the replacement until next year.



UNI-PAC III System



UNI-PAC III Survival Aids Storage Bags

For the record the US designed UNI-PAC III system is a unique survival kit for support and rescue of persons in distress via airdrop. The principle is similar to the Lindholme gear. The UNI-PAC III is a semi-rigid aerial delivery container that is designed to be stored and released from the US military P-8 Poseidon weapons bay to provide an inflatable life raft & survival equipment for survivors in a water rescue scenario. It consists of a water activated raft and survival aid kit for support of 20 persons for 72 hours.

Since 2021 it has been approved and qualified for airdrop from a P8 Poseidon by both US Navy and Australian Navy and the aircraft can carry up to five in the bomb bay. One single air drop of 5 each UNI-PAC III systems, will support 100 persons in distress/ [MoD/DoD/TC]

INDUSTRY

Canadian avionics manufacturer, **Anodyne Electronics Manufacturing Corp.** (AEM), launches new remote-mount radio for special-role and multi-mission platforms. The MTR138-000GNW is a suitable replacement for certain legacy VHF NTX-series radios with the ability to integrate with glass cockpit applications.

Designed with the operator in mind, the MTR138-000GNW features an agile 10W main transceiver and a synthesized guard receiver with the most up-to-date advancements in analogue radio technology in a lightweight, compact, and economical package.

The MTR138-000GNW boasts a 138-174 MHz FM VHF remote-mount transceiver with 128 channels, including two programmable synthesized guard receiver channels. It provides sub-audible signalling, CTCSS/CDCSS capability, with standard and extended tone encoding and decoding. The transceiver control is handled through an RS-422 interface bus and discrete signals.

The MTR138-000GNW is available to order immediately and is expected to begin shipping from this month.

Anodyne Electronics Manufacturing Corp. is a leader in the design, development and manufacture of aircraft communication systems, loudspeaker systems, caution/warning panels and illuminated panel products. AEM also offers design and manufacturing services to other companies, providing solutions for reduced operational costs and giving those companies the ability to focus on their core businesses. AEM is a Transport Canada approved manufacturer and maintenance organization, holds EASA Part 145 Maintenance approval, and is ISO9001/AS9100D registered. (www.aem-corp.com).

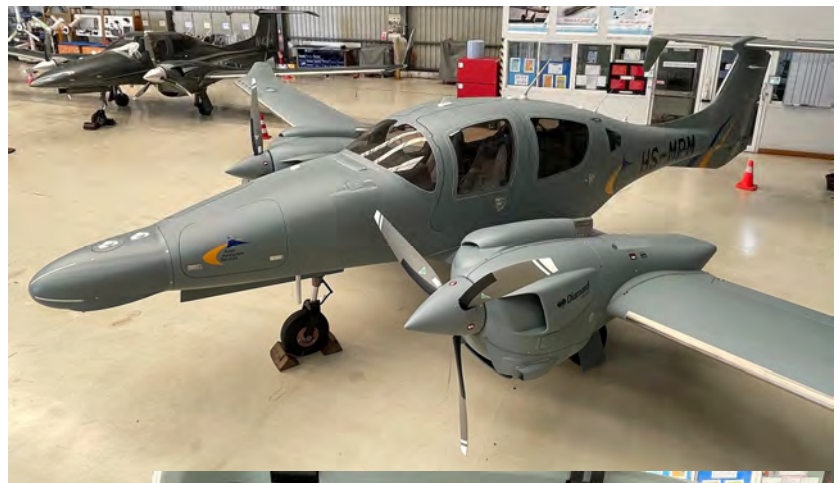
According to those directly involved, the three months, 200 flight hour, US National tour of the **Diamond DA62MPP** was an amazing experience. The DA62MPP performed every day without an issue. Numerous Demo flights were performed daily with Airborne Law Enforcement crews. Police struggle with keeping aircraft "Airworthy" and in service. As aircraft age, and major components need to be overhauled or replaced, aircraft are parked in the hanger for months, evens years while waiting for funding to return them to an airworthy status.

The DA62 platform largely solves those issues, as it's extremely economical to operate every shift, every day, with an airframe that has an unlimited life span, and can remain actively undertaking more crime hours per shift at a fraction of the cost of operating a turbine powered helicopter. [John Neilson]

In September 2022 **Diamond Aircraft Austria** handed over a DA62 MPP (Multi Purpose Platform) demonstrator to Asian Aerospace Services (AAS), a Diamond Aircraft distributor based in Thailand. This is an important step for the company to demonstrate the capabilities of its flagship special mission aircraft to potential customers in this region.

Asian Aerospace Services' DA62 MPP demonstrator will offer alternative configurations for flight inspection, survey/mapping and law enforcement operations to meet potential customers' needs.

The DA62 MPP is the latest variant of Diamond Aircraft's successful Special Mission Aircraft portfolio. The all-carbon-fibre, twin-engine aircraft is equipped with a state-of-the-art glass cockpit and a fully integrated autopilot. It is powered by two turbo charged jet-fuel engines which enable the aircraft to stay airborne for up to eight hours due to their superb fuel efficiency. The carbon fibre material provides for unlimited airframe life and is not subject to corrosion, even when operated in saline and humid environments. Together, fuel efficiency and the unlimited airframe life combine for extremely low direct operating costs, making the DA62 MPP the most cost-efficient Special Mission Aircraft in its class..





There will be many that question their claims but China is promoting its **Harbin Z-20** military helicopter as a design that has its roots in a design office in the Peoples Republic. The visually similar type, which first flew in 2013 looks strangely like the Sikorsky Blackhawk which first flew in 1974.

It is reported by Global Times that the Chief Designer of the Z-20, Deng Jinghui, states that the latest upgrade to the Z-20 military helicopter outstrips the US Blackhawk on advanced technology. The fourth generation Z-20 now offers fly-wire-fire control and active control systems for noise and vibration, features not yet available on the Blackhawk.

In the same vein a team from the **Institute for Science and International Security** is claiming that drones built in Iran and being used by Russia against Ukraine appear to be built using Chinese parts that are based on Western designs. Last month Iran admitted it had supplied Russia with drones but that the supply predated the February outbreak of hostilities.

The Shahed-136 drone uses an engine built by Beijing MicroPilot Flight Control Systems — which is a copy of an engine built by German company Limbach Flugmotoren. The Shahed-131 drone — another drone used by Russian forces in Ukraine as a suicide attack weapon contains an engine built domestically in Iran, but it's a reverse-engineered copy of another Beijing MicroPilot Flight Control Systems engine based on a British design. Who would have thought it?

Setting your mobile phone to Flight Mode is set to become a thing of the past when EASA's latest plan is in place. It is planned that Europe will make airlines equip aircraft with 5G for all passengers.

Under the EU plan, passenger phones will be connected to masts on the ground during low-altitude flights, while airlines will be obliged to install a pico-cell on aircraft that would work as a booster to extend coverage when flying higher.

Airlines have been allowed to provide wi-fi services to passengers since 2008 but passengers are normally required to pay extra for internet access and service is usually only available on longer-haul flights.

As for the **Sikorsky UH-60A BlackHawk** helicopter itself, it carried out a demonstration cargo mission and medical "emergency rescue" entirely on its own without anyone aboard or human guidance in October.

The autonomous flight tests were conducted on October 12, 14, and 18 at the US Army's Yuma Proving Ground in Arizona as part of the Army's Project Convergence 2022 (PC22) experiment in which US, British, and Australian service personnel evaluated 300 technologies, including long-range weapons, un-

Copyright Notice: The content of this publication includes items that are the copyright of others. Where the information is available the source of words and images will usually be indicated together with the source of additional information that seeks to enhance the original information.

Police Aviation News includes materials produced for it by Ian J Commin of Insight Design of North Burnham, Slough SL1 6DS. This includes the banner titles and the PAvCon logo. In addition from time to times images specifically altered by Insight Design and others but originally produced for McAlpine Helicopters [now Airbus Helicopters UK], Oxford, will appear with permission of the original owner. In some cases it may not be possible to indicate the source of this material directly associated with the images used, or such information may have been lost. Such images may be marked 'File' or 'PAR Collection'.



manned aerial systems, autonomous fighting vehicles, and next-generation sensors.

The general purpose of the exercise was to evaluate potential future military technologies. It also emphasizes the Army's insistence that any future combat helicopters like the Black Hawk must be pilot-optional or it's not interested.

The MATRIX automated aircraft systems can take over key pre-flight procedures, including power, secondary control, wind checks, as well as the ability to control elements of adaptive flying like take off and landing. In addition, the helicopter can respond appropriately to emergency situations without human supervision.

During the demonstrations, two pilots flew the Black Hawk to the starting point, landed, switched on the MATRIX system, and exited. MATRIX then took complete control of the helicopter and flew 83 miles (136 km) at 100 kt (115 mph) hugging the valley terrain at an altitude of 200 ft (60 m) to avoid detection.

The Black Hawk also demonstrated an external load sling and a simulated casualty transfer as part of the programme.

Ed: For over a decade the US military has flown numerous trial re-supply missions with pilotless helicopters, most memorably with the Kaman K-Max.

In September, **EASA** issued its Opinion Number 08/2022, a 33-page document that individual European states are now evaluating. If it is voted on in early 2023, the rules covering the operation of HEMS in Europe would come into force in 2024 and individual states would have three to five years to comply with the new provisions.

The 33-page focus is all about risky flights, those in sub-optimal conditions.

The regulations proposed will cover HEMS flights serving hospitals with outdated infrastructure, flights at high altitude and in the mountains, rescue operations and flights to sites where visibility may be poor. Hospitals, specifically, will be required to adapt their facilities to make landing with acceptable degrees of risk. Such flights are currently acceptable.

The proposed new rules for flights to older hospitals require facilities to ensure that there is no excessive deterioration of the obstacle environment. Helicopters flying to these older hospitals will also have to be equipped with NVIS for enhanced situational awareness at night.

HEMS without NVIS should be limited to pre-flight operational sites and well-lit urban areas

Other proposed new requirements for helicopters operating to traditional hospitals include moving maps to improve terrain and obstacle awareness, aircraft tracking coordinated with ground personnel, more thorough pre-flight risk assessments, and increased pilot training for night operations.

Single-pilot HEMS flights to traditional hospitals will be subject to additional rules, including the requirement to be equipped with an autopilot system for night flights. There are new requirements for crew configuration that require a technical crew member to be seated in front of the pilot if a stretcher is loaded on to the helicopter. If the installation of a stretcher prevents the technical crew member from occupying the front seat, HEMS service will no longer be possible. The option has been used to keep legacy helicopters in service, but is no longer considered compatible with the desired safety standards.

Another HEMS flight area affected by the regulatory updates is high-altitude and mountain operations. Performance and oxygen regulations at altitude need to be corrected, along with many other safety orientated regulations.

Fuller details of Opinion No 08/2022 can be downloaded from the easa.europa.eu website



Sensor solutions provider **HENSOLDT** is launching a new flight recorder that combines the latest sensor technologies in an extremely compact design to record flight, data link, video and audio data. The SferiRec®LCR100 has now received ETSO (European Technical Standard Approval) certification for aircraft equipment by the European Aviation Safety Agency (EASA). Due to its extremely low weight, volume and power consumption, the new flight recorder makes it possible to equip light aircraft and drones, as well as business jets and light helicopters.

Christoph Ruffner, Head of the Spectrum Dominance & Airborne Solutions Division at HENSOLDT, said: "HENSOLDT is making an important contribution here to increasing aviation safety. With a powerful flight recorder like the LCR100, not only can data analysis after an aviation accident help to prevent future accidents; critical situations can also be processed afterwards in a fact-based and professional manner using the available data."

The SferiRec LCR100 flight recorder has a large number of interfaces with different data formats to record hundreds of parameters. These include altitude, position, speed, engine data to name but a few. With a weight of one kilogram, HENSOLDT's LCR is currently the lightest device of its kind on the market. The combined recorder unites all recording functions that were previously distributed among different devices. In addition, flight data as well as maintenance data can be read out on an easily accessible SD card. The integrated sensors include a built-in microphone for ambient noise, three-axis gyroscope and accelerometer, a temperature sensor, a GPS receiver and an air pressure sensor.

ACCIDENTS AND INCIDENTS

27 October 2022 helicopter (believed Airbus EC135) Air ambulance of DHART Dartmouth Health operated by Metro Aviation suffered damage in a bird strike on final approach into the Manchester-Boston Regional Airport, New Hampshire. It landed safely. Only the crew was on board at the time. No reports on the extent of the damage or injuries.

17 November 2022 Airbus Helicopter AS350B3 XC-GEA Five people were killed in a police helicopter crash early Thursday in the central Mexican state of Aguascalientes, including the state's security chief Porfirio Sanchez Mendoza. The helicopter came down in a field close to the General IMSS Hospital of Zone No. 3. Governor Teresa Jimenez Esquivel said the pilot, Olegario Andrade Zamorano, maneuvered to allow the aircraft to land in an empty lot, avoiding further casualties. The other three onboard were Capt. Victor Manuel Valdez Sanchez and artillerymen Alejandro Serafin Guerrero and Juan Humberto Rincon Martinez. Jimenez Esquivel confirmed that the crash was an accident but she said the state's government reached out to the Ministry of National Defense to deploy federal forces.

27 November 2022. Helicopter. Details are emerging of a Indonesian police helicopter lost in poor weather as this edition closes. Wreckage found at sea with several persons missing.

SAFETY

The UK Air Accidents Investigation Board issued a short report on another case of emergency services helicopters causing injury to people on the ground due to downdraught.

On the earlier occasion a fatality and injury were caused in Devon by the downdraught of a Sikorsky S-92 contracted to the Coastguard. On the more recent occasion the type was the smaller Agusta AW169, G-KSST operated by Kent Surrey and Sussex Air Ambulance.

On July 2, 2022 at 1710 hrs in Epsom, Surrey as the helicopter transitioned to forward flight after departing from an in-town landing site, the downdraught of the helicopter caused a significant amount of flying debris in a local garden. One person in the garden was hit in the face by a flying object and suffered a significant cut to his face.

The crew of G-KSST had been attending an incident in the local area but had been re-tasked. The crew prepared for departure, which included moving spectators back to a safe area and completing a visual check of the departure area. After a normal start, G-KSST lifted into a hover and completed a clearing turn. The helicopter performed a 'ground and elevated heliport/helideck variable takeoff decision point procedure.' This meant that the helicopter climbed backwards until it reached the calculated decision point (in this case 200 ft agl) before transitioning to forward flight and climbing away on the departure route. The injured person was in the garden in which he had been constructing a climbing frame. There was a large amount of cardboard packaging in the garden as well as a patio umbrella which was up at the time. Although he had heard the helicopter start up, he did not see it initially as there were large trees at the end of the garden. He saw the helicopter as it reversed up for its departure and as it reached the decision point just before the tall trees at the end of the garden. As the helicopter transitioned to forward flight, the householder described his garden as being "affected by a tornado". The cardboard packaging was picked up by the wind with one item found around 15 m away from the garden in a local car park. The heavy patio umbrella was lifted from its stand and struck the householder in the face, causing a significant cut, before becoming embedded in the house wall. Two others in the garden escaped without injury. The speed of the downwash produced by a helicopter is a function of weight, air density and rotor diameter. The rotor downwash reaches its maximum velocity between 1.5 and 2 times the rotor diameter below the helicopter before beginning to dissipate. This maximum velocity can be twice the speed at the rotor head. It is possible to calculate the speed of the downwash at the rotor and estimate the height below the helicopter at which the maximum downwash speed will be reached. The AW169 has a maximum takeoff weight of 4,800 kg, although on this flight it was operated below that weight at 4,272 kg. Calculations of the velocity of the rotor downwash at the rotor head showed that at the time of the departure this would have been around 44 kph (27 mph). The maximum velocity would have been reached around 24 m (80 ft) below the helicopter, with the maximum speed dissipating from this height.

With the helicopter at 200 ft agl the velocity of the rotor downwash should not have been significant, but local effects, such as funnelling by the physical geography of the location, may have further accelerated the air causing the significant downwash experienced in the garden.

Downwash from helicopters can be a significant risk, especially operating in an urban environment. Although the height of the helicopter meant that the downwash should not have been of a significant magnitude, the event caused a significant injury as items in the garden were blown around.

Bell 407 operators are advised to torque check tail boom attachment hardware following an in-flight separation accident last June. The FAA's FAASTeam to issue a special notice reminding all operators of the standing FAA Airworthiness Directive (AD) 2012-18-09 to torque-check the boom's attachment hardware every 300 hours. The accident involved a air tour helicopter in Hawaii, it seriously injured three of the six aboard.

The Bell crashed into a lava rock field, the tail boom was recovered some 762 feet from the main wreckage site.

The 407's tail boom is attached to the intermediate fuselage with bolts, washers, and nuts that connect the four aft fuselage longerons to four corresponding longerons located at the tail boom's forward end. He operator found no obvious issues with the attachments on the rest of its fleet but eddy-current non destructive inspection on the aft fuselage longerons uncovered cracks on two of the five 407s.

Several bulletins and ADs have been issued since 2007 related to Bell 407 tail booms with regard to the aft fuselage top skin and bulkhead, replacement attachment hardware and torque checks, installation of external strap doublers on the upper-left longeron, and repair instructions for cracked longerons.

PEOPLE



On November 12, 2022 Robinson Helicopter Company bid a final farewell to its founder, Frank Robinson. Robinson, 92, passed away peacefully at his Rolling Hills, California home.

One of the most recognizable names in the helicopter industry, Frank Robinson was a pioneer, a man not driven by reward or accolades but by a vision that redefined the industry and forever changed general aviation. Robinson will be remembered for the design and manufacture of the R22, R44, and R66 model helicopters. Known for their simplicity and reliability, the popular helicopters have a distinct profile and can be spotted easily and frequently all over the world.

Robinson's fascination with helicopters began in 1939, at age nine, when he saw a picture in the *Seattle Post-Intelligencer* of Igor Sikorsky hovering his VS-300 helicopter, an image that captivated Robinson and set the course for his life's work.

earned a BSME degree from the University of Washington, later attending Wichita State University's graduate aeronautical engineering school. His career began in the late '50s with Cessna and continued through the '60s working for many leading aerospace companies, including Bell and Hughes. In 1973, at age forty-three, unable to interest any of his employers in the idea for a simple, personal helicopter, he resigned from his job at Hughes and founded Robinson Helicopter Company in his Palos Verdes, California home. Six years later, defying critics and overcoming enormous obstacles, Robinson was granted FAA certification for his two-place, piston powered R22 helicopter. The unknown helicopter company delivered its first production R22 in October 1979. By 1989, the R22 had gained a foothold in general aviation, opening a previously untapped market for private helicopter ownership.



In the early '90s, realizing the potential for a light mid-size helicopter, Robinson introduced the four-place piston powered R44. Orders for the R44 quickly piled-up and the company became a recognized player in the aviation industry. In 2010, Robinson once again expanded his line with the five-place, turbine powered R66.

Robinson's relentless determination earned him the respect of both colleagues and competitors. Affectionately called a rock star in certain aviation circles, Robinson retired in 2010 at age 80.

www.PoliceAviationNews.com
A wealth of on-line resources





The list of awards and honours bestowed on Robinson is long. Most notable:

- 2013 Daniel Guggenheim Medal – AHS International
- 2011 Lifetime Aviation Engineering Award – Living Legends of Aviation
- 2010 Cierre Lecturer – Royal Aeronautical Society
- 2011 Inducted into the U.S. National Academy of Engineering
- 2004 Howard Hughes Memorial Award – So. California Aeronautic Association
- 2000 Named Laurels Hall of Fame Legend - Aviation Week & Space Technology
- 1997 The Doolittle Award - Society of Experimental Test Pilots
- 1992 Laurels Award – Aviation Week & Space Technology
- 1991 & 1990 Igor I. Sikorsky International Trophy – American Helicopter Society

Today, the company continues under the leadership of Frank's son, Kurt Robinson and, to date, has delivered over 13,000 helicopters worldwide.

It may be in the news for some of the wrong reasons lately but last month, in among the turmoil, 2Excel Aviation was celebrating the achievements of two of its young engineers. Employee-owners Sacha Wright and Albert Ilunga, both based at the company's Doncaster site, were recognised by the Royal Aeronautical Society at its annual awards ceremony held on November 28 to honour high achievers in the global aerospace industry



The Society's Awards Programme celebrates individuals and teams who have made an exceptional contribution to aerospace, whether it is for an outstanding achievement, a major technical innovation, exceptional leadership, or for work that will further advance aerospace.

Sacha Wright, 2Excel Aviation's Head of Design, was awarded The Sir Ralph Robins Medal which honours a distinguished career and encourages excellence in engineering leadership during the early and middle stages of an individual's career.

In just ten years, Sacha has created a highly respected, in-house design engineering capability for the company which delivers complex projects within very challenging schedules and budgets, creating superb value for money for customers including the UK taxpayer.



Sacha Wright and Albert Ilunga [Supplied]

The outstanding example of her work was Sacha's leadership as Head of Design and Head of Airworthiness for the design and delivery of a fixed wing Search and Rescue and Surveillance capability, with the first mission being flown just eight months after contract award which demonstrated exceptional programmatic and technical leadership.

Albert Ilunga received the Herbert Le Sueur Award which is conferred on a young person whose studies will be enhanced by attending a UK or European Conference with at least some content related to either helicopter or fixed-wing aircraft safety.

Albert is an aerospace Design and Certification Engineer working as part of a team to certify challenging modifications on Part 23 and Part 25 aircraft.

He successfully delivered a highly complex civil flight test programme involving the safe separation of life-saving equipment from a civilian fixed-wing aircraft – which included the co-ordination of aviation and maritime stakeholders, while ensuring the safety of third parties, an outstanding achievement for a young engineer in the early stages of his career.

Steve Riley, Director of Capability Development at 2Excel Aviation, said: "We know that what makes our company great is its people, and Sacha and Albert's achievements are proof of that. Their innovations are helping to save lives.

"The high calibre of their excellent work and their dedication is rightly reflected in these awards, and we could not be more pleased that the Society has chosen to honour them in this way."

2Excel Aviation has recently won major contracts and is recruiting for key roles within its departments delivering significant aircraft conversion programmes.



The end of this month will see the departure of a familiar face from the aviation show scene. David Findlay formerly the European face of Avalex is departing on retirement and a bit of a world tour.

A few months ago, around the time of the PAVCon Europe in Austria (June) Mercury finalised their takeover of Avalex and since then David has been their European face. His last major show was the recent European Rotors in Cologne. Time for last photos and to meet his replacement. Both PAVCon Europe 2023 in Bilbao and European Rotors 2023 in Madrid are in the diary for Mercury.

Look out for the new man - +-Xavier Fito, resident in Switzerland, Xavier.Fito@ch.mrcy.com +41 78 794 58 24.



OBITUARY

With the buffer created by many years of retirement it is rare to mark the passing of former air support professionals in PAN but one came to notice last month. Former Metropolitan Police Sergeant 137J/151975 **John Farrow** passed at the age of 79 years, he was among the pioneers of UK police air support 45 years ago.

John was a sergeant at Ilford police station when he was seconded to observation duties with A9 department at Scotland Yard in the mid 1970s, they operated leased helicopters and aircraft on short contracts from industry. In 1976 their aircraft of choice was the Enstrom F28 hired in from Helicopter Hire of Southend. The single piston engine two seat helicopter used just eyeballs and stabilised binoculars for sensors it was the best technology for its time.

The aircraft was based at the public airfield at Elstree, Hertfordshire and parked out in the open where it was easily attacked by those who saw air support as a threat. In early October 1976 the John and his commercial pilot (Captain Voy) found their aircraft (G-BDKD) with windscreen damage and were unable to fly. It was not the first instance and shortly afterwards the aircraft was moved to the more secure location at Lippitts Hill where London police helicopters are based to this day.

After a while John returned to ordinary police duties and a few years later he was invited for a publicity photo shoot at Lippitts Hill with the new Bell 222 helicopter, along with several local police officers, a fitting marker for his previous involvement. He retired from policing over 26 years ago. RIP.



MOVE ALONG THERE

The police in various regions have been having a hard time of things in recent times. In the US they have been threatened by defunding and in the UK they are effectively being left short of funds! Much of the trouble seems to revolve around the Black Lives Matter movement but in the UK it seems that commentators, journalists and politicians – and in particular the new Home Secretary - just seem fed up with the lack of leadership being exhibited by senior officers in a wide range of fields. In terms of this publication, the lack of effective leadership and decision making is perhaps where the problems of NPAS lie.

But yet again the two different threads appear connected by a recent event.

Last month there was a Police Conference, a joint event of the Association of Police and Crime Commis-

**2023
HAI HELI-EXPO**
BY HELICOPTER ASSOCIATION INTERNATIONAL

Celebrate!

**THE WORLD'S LARGEST
VTOL SHOW**

HAI HELI-EXPO March 6-9
Exhibits Open March 7-9
heliexpo.com

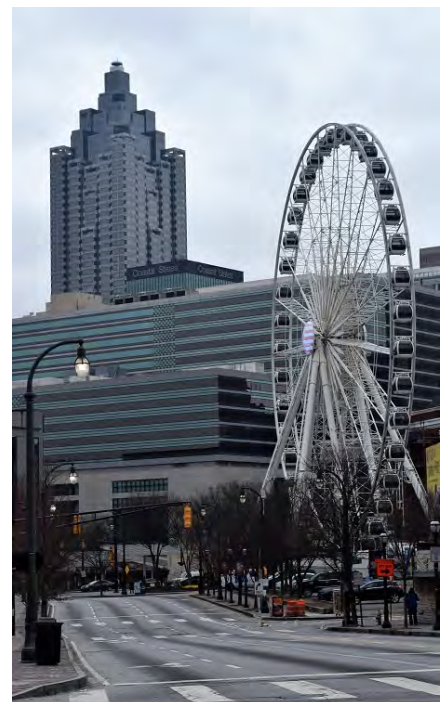
SCAN AND REGISTER TODAY!

75 YEARS
1948-2023
Helicopter Association International

Space available. Apply Now!



**HELI-EXPO
2023 IS BACK
IN ATLANTA
GEORGIA
USA**



**ON-LINE
NEWS**

www.POLICE AVIATION NEWS.info
www.POLICE AVIATION NEWS.com

sioners and the National Police Chiefs Council (the leaders of men no less), at which the Police Race Action Plan was discussed. The plan's Programme Director is our old friend Deputy Chief Constable Tyron Joyce – the former head of NPAS who was displaced for alleged bullying of staff just a couple of years ago. I say alleged, it was apparently proven but seems to have had no detrimental effect on his subsequent career.

This is not the first recent instance the NPCC making questionable decisions a fact underlined by the new Home Secretary when she also told them to drop their plans to require all future police officers to have a university degree. You do not need a degree in policing or physics to break up a Saturday night pub fight.



In the background of the wreckage that is Doncaster Sheffield Airport (DSA) is the sad tale of the last flying Avro Vulcan bomber XH558. Having run out of money, and industry backing to stay on the air show flying circuit the iconic bomber retired to DSA in 2015. By 2017 the charity was set up in a hangar and paying a reduced rental as it undertook fund raising for its future. Unfortunately the owners of DSA wanted their hangar and 2Excel moved in as they were pushed out into the open. At the same time several ongoing fundraisers were lost, including the planned PAvCon 2017, it ended up down the road in the excellent Best Western Mount Pleasant Hotel. Fortunately several foreign police delegates were able to get up the steps for a tour of the interior [right] during the event. Five years on the Vulcan and an English Electric Canberra owned by the trust face a far from uncertain future. In an ominous development, on November 20 the public were drawn to the edges of DSA to hear the last engine run of the Vulcan before being “put to sleep forever”.



SHORT CHANGED?

Readers might notice that this edition of PAN has a fair bit less content than recent months! Fear not, it is partly down to the publication of a Special Edition on the recent conference and exhibition in Cologne “European Rotors”! The edition includes the editors report on the new Shotover EO/IR sensor following a long conversation with Tom Churchill in the expo hall in cologne. You will find a copy of this 18 page report on the PAN websites www.policeaviationnews.com and www.policeaviationnews.info



BOOKS

Speak Up, Listen Down – Finding the courage to challenge and the humility to learn.

Former British Police Sergeant, David Howell, shares experiences of serving the public and describes the struggles he faced when trying to question leaders on their decisions. In this book he shows that embracing cognitive diversity is the way for workplaces to create a thriving workforce, foster more psychologically safe environments, combat bullying and help promote better leadership.

Reflecting on his experiences and starting much-needed conversations about leadership and teamwork, David Howell's first book charts the ups and downs of his amazing career with Staffordshire Police. Literally "ups and downs", David spent 18 fascinating years working within police air support, initially managing the Central Counties Air Operations Unit at Halfpenny Green Airport. This was the consortium helicopter unit serving both Staffordshire Police and West Mercia Police. Whilst managing and being the training officer at the unit he was fortunate in 2008 to travel to Jamaica to train their military and police in helicopter operations.

Following the tragic police helicopter crash in Glasgow in 2013, which crashed onto the Clutha Pub, David was asked to organise a team and helicopter to travel to Scotland to support their police service in their hour of need. Being the first police officer in the UK to have been authorised by the Civil Aviation Authority to train Crew Resource Management, his training skills were sort after country-wide.

After his unit at Halfpenny Green was sadly closed in 2016, following three years working with the newly formed National Police Air Service, David moved to London to manage the UK's largest air base at the world renowned Lippitts Hill. Some of his experiences there included flying with President Obama's aerial security detail in 2016, attending the terrorist attack on Westminster Bridge in 2017 and dealing with the tragic fire at Grenfell Tower.

During the latter years of his career within air support, David experienced workplace bullying. This negative experience took its toll both mentally and physically, leaving a profound impact on David's experiences within policing, and ultimately leading him on a journey to start a debate encouraging open and honest challenges and conversations in the workplace.

His newly published book seeks to unravel and reflect upon the spectrum of these remarkable experiences, from walking the streets of Stoke-on-Trent to flying with President Obama. A totally unique career that will never ever be replicated again, but one that was very much focused on the building block of any organisation - people. Specifically, the individuals and what innate talents they have to offer whilst safely coping and dealing with the complexity within their specific roles. Why people seek to bully others and why people are themselves bullied within the workplace is also explained, based around his own very personal story and having obtained a deeper individual insight via psychometrics.

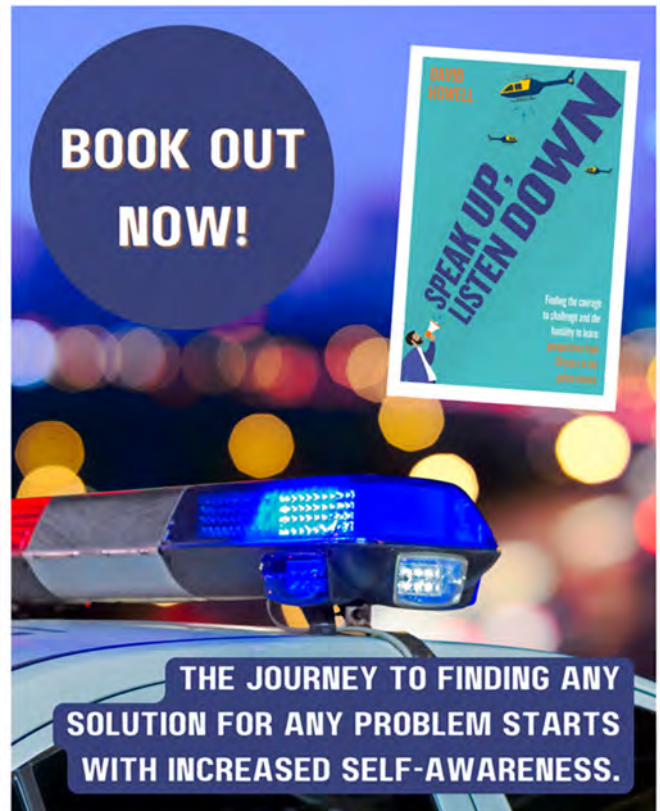
After leaving air support in 2019, David entered the world of change management, teamwork and leadership training, utilising his people training skills whilst employing ground-breaking psychometrics. His 30 years of policing experience are now aiding businesses and organisations to help them better understand their people - highlighting who is suffering from burn out and in need of much needed support.

The book is available at Amazon <http://ow.ly/mz5G50LqbT4> and the ISBN No.s are:

Hardback 978 - 1- 9993477 -5 - 8 £15.99

Paperback 978 - 1 9993477 - 4 - 1 £10.99

eBook 978 - 1 - 9993477 - 8 - 9 £5.99



UPCOMING EVENTS

PAvCon Europe 2023

My wife says I should not do it (and she may even be right) but plans for the 2023 edition of PAvCon Europe are winding up for a meet up in early June 2023.

Although the now customary calendars are in the print shop and may end up on your desk some day soon there is much to do. Fortunately we have been to Bilbao before so there is a template, albeit a decade old and in need of re-visiting.

All you need to do now is ring the dates in your diary for 5-7 June 2023. The first day, a Monday will be a training day and the day when exhibitors need to be setting up their exhibition. The main conference and exhibition days will be the Tuesday and Wednesday (6-7 June). The cost may be a bit more tricky than usual in these days of the return of inflation but the plan is that the 2023 prices will be the same as for 2022. The detail should be available and confirmed during January 2023.



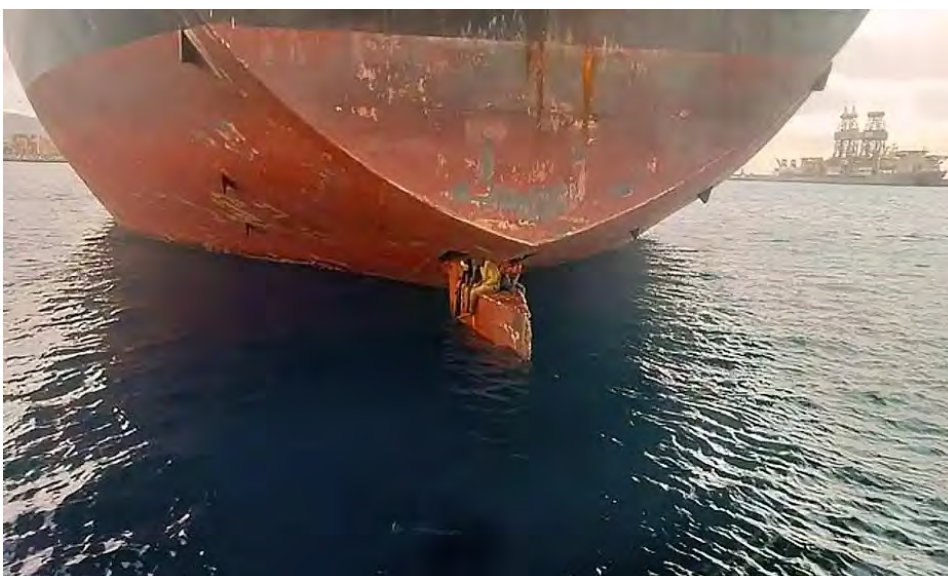
POLICE AVIATION RESEARCH
 Publishers: Police Aviation News
 Organisers: Police Aviation News
 7 Windmill Close, Waltham Abbey, Essex EN8 3BG United Kingdom
 E-mail: editor@policeaviationnews.com admin@pavconeuropa.eu
 Telephone: +44 (0)7778296650 +44 (0) 20 8144 1914 (Skype)
 www.policeaviationnews.com www.pavconeuropa.eu
 www.brynellott.co.uk

UPCOMING

5-7 December 2022 Tampa, Florida. The Airborne Thermographer Certification Course is an in-depth study of airborne thermal imagery use in the areas of tactics, technology and theory. The course offers certification as an Airborne Thermographer to qualified students who attend all 24-hours of training, pass the written exam and demonstrate proficiency on the use of a static airborne thermal imagery system. The Airborne Thermographer Certification portion of the course is presented by Mr. Brian Spillane, Teledyne FLIR, who is a Certified Thermographer Instructor. The remainder of the course is presented by airborne thermal imagery experts, featuring Nick Minx of Tactical Flying, Inc, as the lead instructor. This course has been specifically designed for public safety aviation personnel for use in support of missions using airborne thermal imagery systems. The course is designed to benefit not only the TFO but the public safety pilot as well, as all of the instructors explain and demonstrate the theory, technology, tactics and legal issues involving the successful use of thermal imagery cameras and systems.

9-11 December 2022 NIST sUAS Standard Test Methods Proctor Training Course – Advanced. Grand Forks, South Dakota, USA. University of North Dakota, John D. Odegard School of Aerospace Sciences, Robin Hall, 4251 University Avenue, Grand Forks, ND 58202-9036. Register on-line at www.publicsafetyaviation.org

THEY JUST KEEP COMING.



It may be costing the Western World a great deal of money to deter, but you cannot help but admire the determination of the individuals involved in the ongoing migration from less well off regions.

A recent image published online by the Coast Guard in the Canary Islands (Spain) is of three men from Nigeria who spent 11 days perched on top of the rudder of a vessel.

The numbers of would be migrants who do not survive just grows and grows. [TC]