

Police Aviation News

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Issue 308

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BELGIUM - MAJOR RETHINK

DALLAS FAKE NEWS LEAK

EURO SPAT OVER MIGRANTS

EUROPEAN ROTORS - No.1

EDITORIAL

There seems to be a side effect of Covid that was not previously suspected. Lunacy.

I fully appreciate that we all have our moments of actions divorced from reality but in the last year or so the affliction seems to have got worse in all sectors of human activity.

Every month I have this so far unrealised expectation that I will be able to record no questionable news about police aviation in England and Wales, but repeatedly that hope gets dashed. Why is it that some 43 highly paid and supposedly intelligent police chiefs and their hangers on cannot somewhere find intelligence to run a life saving air service sensibly where other nations can? I do not think for one minute the air services across the world do not have their issues and ventures into stupidity but somehow they manage to keep the lid on their problems for most of the year. Such secrecy eludes the police chiefs of England and Wales despite their much vaunted higher education.

Sadly the 'door of leaks' seems for ever open in Britain, but that is not the same wide open door as currently allows waves of migrants to leave far off countries and turn up on the coast of France to pile into unseaworthy inflatable boats and set forth across the English Channel to live in the land of milk and honey that is their perception of Britain. For 900 years nations in Europe have been troubled by how they could find a way to get a large numbers of invaders on the beaches of Britain but now a ragged army of ill-trained migrants are rolling onto the beaches virtually unchecked in ever increasing numbers. There is always a positive side of course. If these people are truly being sensible in their choice of a journey of a lifetime life, we can only hope that they do well, join the police and parliament and are quickly promoted to become decent future leaders.

The latest wheeze from the police in London is to issue a booklet that lists no less than 44 questions that must be answered before a police officer can use handcuffs on a person. Perhaps that represents one random suggestion from each area chief constable and one from the Home Secretary's domestic cleaner. The questions are repetitive and inane as could only have been dreamed up by a university graduate in a firmly locked room but that they even saw the light of day is worrying. Typically the document is being presented as 'leadership' by people who clearly know no better. And they want everyone to be a graduate before they are allowed to join the police? Heaven preserve us from the hollow edicts of the police chiefs council.

One jab or three?

Bryn Elliott

LAW ENFORCEMENT BELGIUM

STATE POLICE The operator is currently working up the selection of a future fleet to replace the current MD helicopters. They are happy with their current MD520N and MD902 helicopters and remain positive about the much maligned Notar but new thought processes are at hand.

Whether MD will ever give them the option to remain with MD and Notar technology remains a massive question mark. Time and time again MD promise to relaunch projects other than the warmed over Vietnam era MD530/540 only to never deliver. There is perhaps a little time left to reverse the failure to meet customer aspirations but the clock is ticking and there are so few true believers left.

Meanwhile the original fleet of three basic MD900 airframes G-10, G-11 and G-12 purchased between 1997 and 2001 are being upgraded to MD902 standard, matching those of the two later Explorer airframes, G-16 and G-17 acquired in 2011 and 2017. Last month G-12 emerged wearing a new colour scheme of low visibility grey.



COVER IMAGE: After the first edition of European Rotors was cancelled in November 2020 the organisers were obliged to put things on hold for a year and try again. This year, despite ongoing restrictions the event in Cologne went ahead successfully. One of the major exhibitors was air ambulance operator and trainer ADAC who have a major base located close by at Hangelar, Sanct Augustin.

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At the brief police aviation conference section of the recent European Rotors Jeroen Eeckelaers of the Belgian Police air unit announced that after many years of independent thinking, the Belgian National Police is to go fully EASA integrated with their new fleet from 2025.

Ed: Years ago a group of well-informed and enthusiastic senior figures from emergency services operators from Finland, Germany, The Netherlands and the United Kingdom met up – it was a meeting at least partly facilitated by the PAVCon Police Aviation Conferences in Europe – and approached EASA with a view to talk through the options available to police aircraft across Europe. As a result of those meetings the original EASA plan to treat all police aircraft as State Aircraft, pretty much able to operate as they wanted to, was largely set aside. Belgium and a few others originally decided on the State Aircraft route as it offered many of the easements enjoyed by such as the US Public Aircraft but the majority opted to take the stricter EASA route and apply for operational easements.

It was not a perfect answer and occasionally it raised issues that were less than popular but, as this later Belgian decision indicates, it has proven to be the way to go.

KENYA

NAIROBI: Last month the Kenya Airports Authority published a notice of aircraft left abandoned across its airports. Owners of the aircraft lying uncollected at KAA airports apparently include the Somali Air force, Jetlink, Skyward, Eagle Aviation, Prestige Aviation, Fly540, Pan Africa Airways, and Planes for Africa.

The 73 items, mainly complete airframes or hulks, included remnants of five abandoned Kenya Police Air Wing airframes on Wilson Airport. The numbers are larger than 73, in excess of thirty airframes lie at Wilson Airport alone. Wilson Airport is located to the South of Nairobi and is the main base of the Kenya Police Air Wing.

The five former police airframes identified this time are 5Y-BBV a Cessna 402C and four Cessna 310R 5Y-KPA, 5Y-KPF, 5Y-PAW and 5Y-PAZ. The reserve price on some of the Cessna 310 twins is 6,465 Kenya Shillings, that equates to just \$58 so they may be a bargain. The lowest price quoted in the catalogue is just \$44.93, it all depends on whether there is a bidding frenzy. You might be able to pick up a Boeing 707 for just \$2,500 as a scrap price but it may be a great deal more and getting it home may be a problem.

A similar exercise took place in 2019 but failed to clear the large number of parked up aircraft taking up valuable space with the owners not paying their parking fees. In August last year the KAA warned owners to remove their abandoned aircraft and settle their accounts or face their assets being auctioned off.

Interested buyers will be required to pay a deposit of KES100,000 shilling (US\$900) per item on auction. Where the bid price is lower than the deposit price, the bidder will be refunded the difference between the bid price and the deposit amount on presentation of the receipt.

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Ed: All purchased items are supposed to be paid for and collected within seven days from the date of the auction failing which the KAA will charge storage KES10,000 (USD90) per day until collection. If the items are not collected within 14 days, the items will be forfeited to the regulator. It is uncollected parking fees that led to the auction in the first place.

PARAGUAY

POLICE: Two Bell 412 helicopters delivered new to the Brazilian Federal Police nearly 40 years ago are being donated to Paraguay. After thirty years use in Brazil the pair were taken out of service and put into storage – one in 2011, and the other in 2014. After five years of storage the helicopters were offered to police forces in Brazil in both Santa Catarina and Rio Grande de Sul, but both declined due to the high cost of getting them back in the air after the years in storage.

In February 2020 Brazil's then Minister of Justice and Public Security put forward a proposal that the airframes be donated to the government of Paraguay for border patrol and anti-drug trafficking. After a lengthy period the proposal has been accepted.

Paraguay will need to bear the cost of getting the pair airworthy but there are a number of hurdles to cross first as several Government departments involved in Public Security and Combatting Organised Crime, finance and taxation, constitution, justice and citizenship agree to the deal.

The Brazilian Federal Police will bear the cost (around US\$18,000) of transporting the 412s to their new owners. This involves a road journey of just short of 1,000 miles from their hangar at Brasilia's international airport to the city of Foz do Iguacu on the border, where the transfer to Paraguay will take place.

Ed: The police in Paraguay have operated helicopters before, several Robinson R44 in 2010 and four former US DoD Bell UH-1H from late 2011. The latter are now over 50 years old and have not been reported recently but are thought to be the only assets



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SPAIN

GUARDIA CIVILE: The large contract for new Airbus helicopters was finally signed last month. Coincidentally Airbus started buying in long lead role equipment for police role equipped EC135 airframes.

In July it was announced that a deal had been agreed to purchase 40 helicopters Spanish Interior and Defence Ministries. The deal covers 18 H135 for each with 4 H160s for the Interior Ministry. The Interior Ministry H135 acquisition will replace the legacy BO105 and BK117 fleets, some of which date back to delivery in 1973. There are currently eight 105s and nine 117s in operation with the Spanish Policia, Guardia Civil and the Spanish Customs (Aduanera). The Interior Ministry budget for these helicopters is spread across the years 2021-25, and totals €222M for the aircraft and €39M for “implementation”, without specifying exactly what that covers. The agreement between the Spanish Government and Airbus also provides options for a further 23 H135 helicopters. [Helihub/Meeker]

SWEDEN

POLICE AIR SUPPORT: It is a very rare occasion where a company finds its product openly praised by the customer. Even more rare is praise from a law enforcement agency especially one in Europe. They simply do not do that sort of thing even if they think and believe it. When the Air Covers company received praise from the Ground Operations Manager of the Swedish Police Air Support Unit they were naturally proud of their ability and expertise and posted it to social media.

“In the early part of 2020 the Swedish Police Air Support Unit started a project to look for an alternative engine cover for their Bell Flight 429 fleet that could be used for both summer and winter in Sweden. We had previously met some of the staff at Air Covers at the 2019 HAI exhibition in Anaheim USA. Our first impressions of them was that they were very approachable and extremely professional so the choice of who to contact for the project was easy. After contact with John Pattinson in May 2020 to describe our needs it was only a matter of 24 hours before we received some images of different proposals. We chose the spilt cover which at winter time would cover both the engine cowlings, inlets and exhaust as well as the MGB cowling with a collar for the mast to prevent snow getting inside the cowling. The rear part of the cover could be detached and used on its own for summer use.

“Air Covers are a fantastic company to deal with, after receiving the first prototype (which arrived within 6 weeks) we sent feedback with some suggestions for a few small modifications, this was met with enthusiasm and the covers went back to Wales. Within a week they were back in Sweden following modification and fitted perfectly.

“The finish and workmanship on these covers is the best we have seen during the long time (over 50 years) we have been working with helicopters.

“We then ordered a second cover for our other northern base with the idea of trialling the covers during the winter. They were tested in the most demanding environment of a harsh Swedish winter and did not



disappoint. We subsequently ordered covers of the same type for the rest of the fleet and these were delivered smoothly and very quickly.

“We can highly recommend Air Covers as a very professional company that truly has the customers needs in focus”

Air Covers Ltd., is based at the Bryn Business Centre, in Wrexham, North Wales, a significant location I feel! They have been very adventurous with the “What3words” they selected for their site and have clearly checked out every option to come up with an apt [headrest.pasting.choppers](#)

UKRAINE

BORDER TROUBLES: On November 11 it was announced that Ukraine will deploy another 8,500 troops and police officers, and 15 helicopters, to guard its border with Belarus, and thwart possible attempts by migrants to breach the frontier.

The European Union has accused Belarus of encouraging migrants to come to its territory then pushing thousands of them to cross into Poland and other neighbouring EU states in retaliation for sanctions imposed on Minsk. While not an EU member, Ukraine is wary of becoming another front in the migrant crisis.

The Interior Ministry has said the new forces would comprise 3,000 border guard servicemen, 3,500 servicemen of the National Guard and 2,000 police officers supported by Interior Ministry aviation assets including fifteen helicopters to ensure mobility and, if necessary, will transfer our forces to the border. [Reuters]

UNITED KINGDOM

NATIONAL: As October closed The Guardian newspaper, much beloved of the left and woke, broke a story that civil liberties activists were expressing distress that NPAS were planning on increasing their spying on the population. Not for the first time it turned out to be a far from fresh storyline that was being steered towards sensationalism.

It turned out that the core of the story relied upon the engagement of NPAS with industry surrounding their enquiries into BVLOS drones for the future. In effect the documentation behind the thrust of their presentation at the Helitech event.

Police in England and Wales are considering using drone mounted cameras that could film high quality live footage from 1,500 feet (457 metres) raising concerns among civil liberties groups. The concerns were being expressed about activity that is effectively currently undertaken by helicopters and fixed wing. The only new information was that the airborne element would be unmanned.

Revealing that the detail they are seeking is sufficient to enable officers to pick out facial features and vehicle registrations from between 500 and 1,500 feet and be on a drone that is capable of staying in the air for up to four hours and flies up to 50km (31 miles) from the base station may have startled some but it is if anything a reduction in capability the current fixed wing can already stay airborne for up to six hours. At the core of the worry though is that Britain currently has something in excess of 5 million CCTV cameras peering out at the population and more being brought into service daily. The figure horrifies many until the cameras consistently solve major crimes. Airborne cameras are just a tiny percentage of surveillance and yet they cause the greatest furore.



The Home Office is said to be backing the NPAS project to replace manned aircraft with drones on the grounds that it will take away noise and carbon pollution. Clearly they have perhaps over simplified their expectations. Drones without engines is a new concept, and no-one is even dreaming of electric aircraft capable of four hour flights,

The document, not reviewed previously here, was a European Tender market engagement exercise published on September 21 that closed on October 11, a week after the Helitech presentation details of which were published in the November issue of PAN.

NPAS were seeking to determine what technical functionality currently exists for Airborne EO/IR (Electro-Optical/Infra-Red) systems that might be used on the proposed BVLOS drones they were assuming would replace the current fleet.

Alongside the imaging systems, NPAS is also looking at how airborne data links will permit live video imagery to be transmitted into force control rooms and operational resources on scene. High quality colour video, low light and infra-red imagery of sufficient detail and quality in daylight, low light and darkness is to be provided to demonstrate the EO/IR performance at operating heights, typical ranging from 500 to 1500 feet. All this happens now in manned craft.

Surprisingly the imaging systems they wanted information on were classified into three weight bands:

- under 4kg total weight
- 4kg-10kg total weight
- 10kg-17kg total weight

The Systems must be capable to operate on an aerial platform which will be airborne for a minimum of 4 hours and be operating up to 50km away from the base station. Additionally they have to be compliant with UK radiocommunications regulations and must not be subject to ITAR limitations on use. The latter stipulation virtually side-lines current equipment from FLIR and Wescam.

In recent times it has generally been held that the L3 Harris/Wescam MX-10 favoured a few years ago for the EC135T2 retrofit and the P68R fixed wing was good on price but in many ways too small. The MX-10, introduced in 2009, has a fully integrated weight of 38 pounds (17.2 kg), has a 10-inch (26 cm) diameter and stands 14 inches (36 cm) tall. Crews get on with the 10-inch turret but operationally they favour the flexibility of airframes with the FLIR and Wescam 15 inch sensors fitted to the EC135P2 and the EC145.



The MX10 ©L3 Harris Wescam

Last months edition covered the subject of what drones were available and how many staff are apparently required to operate even the simplest of craft. There remains some question over whether a ground station can remain economic in real world aviation and whether current technology can expect to operate a drone flying at 500 feet from a distance of 50km. The curvature of the earth and intervening structures would seriously diminish the ability for a base to directly control such a craft. Reliance on satellite control would resolve many problems but be prohibitively expensive. In a pursuit scenario the bandit car only needs to drive for a short time before the following craft is presumably forced to break off and turn back. Clearly this is an idea waiting for technology to catch up.

Ed: I fully realise that researching and understanding future requirements is creditable activity but NPAS have an urgent need for real world new manned aircraft now and here they are being diverted into thinking of an unmanned generation of airframes that their children, potentially their grandchildren, MAY operate. Industry insiders with considerably more insights into drones believe that drones of the type that NPAS are seeking won't be a viable solution for at least 10-years, if not 20. For all the reasons previously given drones will not be able to fully do all the jobs current manned aircraft can do now.

Even if they acquired several high endurance fixed wing drones like the military has, they won't be able to afford to operate them. Check with the military, their drones with ground stations are much more expensive to operate than a comparable manned aircraft. And NPAS can barely afford to support the manned airframes they have now!

The industry still needs a great deal more time to mature, and the regulators in the US and Europe are still groping in the dark seeking answers. There is still way too much uncertainty in the industry; regulations, certification, airspace issues, dependability, liability.

A handful of years ago over here in the UK BAE were flying a Jetstream twin aircraft G-BWWW and the company claimed it was on the cusp of offering a tried and tested viable "sense and avoid" system to the world. In July 2008, the BAE Systems team that also included the well respected Cranfield Aerospace Ltd and the National Flight Laboratory Centre at Cranfield University achieved a major breakthrough in unmanned air systems technology. The team flew a series of missions, totalling 800 mi (1,290 km), without any human intervention.

Then it went quiet and the Jetstream was parked up at Cranfield where it has been for years now. Several enquiries direct to BAE have met with a stony silence. Something spooked them, I wonder what?

In the same vein NPAS has issued a Job Advert for a post they describe as Head of Futures and Innovation. The lucky candidate is to be a key member of the Senior Leadership Team, someone who is sup-



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posed “excited about the possibilities” that new technology brings. A channel to keep NPAS at the forefront of developing new ways to deliver public safety from the air, defining and directing policy to meet the requirements of air policing.

This task will include the integration of BVLOS drones and alternative technologies into NPAS operations, whilst working in partnership with industry, academia and HM Government. The candidate should have extensive knowledge and understanding of UK aviation regulations and be familiar with working with the Civil Aviation Authority.

We are told that the successful candidate will initiate, drive and deliver national research, trials and projects and seek out opportunities for emerging technology, drone operations and best practice in aviation. Importantly they should have experience of the RPAS regulatory environment.

Ed: Fine prose but what are NPAS thinking? In short, a terrific way to spend £58,524 - £62,466 each year in view of recent comments. If BVLOS does take a decade to bring to realisation that is perhaps a job for life bringing in three quarters of a million for simply reporting technical progress that you can read in PAN, Flight, and Vertical from time to time. It is only public money as one well known member of the NPAS once commented. While travelling I met someone claiming to be a prospective candidate for the post. He was approached and offered the opportunity. After seeing what it entailed he turned it down and went for a proper job instead.



NPAS fixed wing on air to COP26 over the Firth of Forth ©NE NPAS

Last month COP 26, the 26th iteration of the Conference of the Parties, in Glasgow, Scotland, was attended by countries that signed the United Nations Framework Convention on Climate Change (UNFCCC) - a treaty agreed in 1994. Or most of them anyway.

The UN climate change conference had an aim of gathering of the great and the good of governments, businesses, institutions and financial actors to drive a green, healthy and resilient saving of the world. Few really thought it would not be a farce but it was better than doing nothing.

Achieving the saving of the world by bringing together the leaders of the world and their extensive staff in one place to talk for two weeks was a challenge especially when leaders such as the President of the United States and his entourage transported some 85 or so motor cars, helicopters, security staff and trusted cooks and bottle washers in many giant aircraft to Glasgow via Italy to speak on how to cut emissions by flying less, driving less and thus save the world.

The hosts of course have their own wayward thinking in that they too often failed to find the most low carbon means of arriving in the city where for a few short days the electric car was supreme. Any elements that were high carbon were



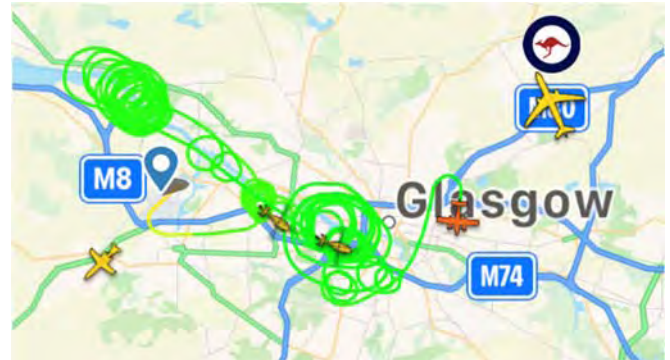
Issue goody bag for COP26 @Twitter

neatly brushed aside. The supposed ‘fact’ that there were insufficient electric car charging points available in the area to support the event was explained away as a bit of fake news – but that was probably fake news itself.

Into this circus stepped NPAS who assigned one of its two operational Vulcanair P68R airframes to assist Police Scotland with their Glasgow based Airbus H135 helicopter on a daily basis.

In turn the aircraft G-POLV and G-POLW were obliged to dispense with their usual callsigns as they clashed with that used by Police Scotland (reputed to be Sierra Papa 70 (UKP 51). In place of the NPAS fixed wing call signs (UKP154 or UKP155) the duty aircraft was assigned UKP99 a surprising resurgence of the historic “India 99”

One of the two NPAS aircraft transited the 200 miles from Doncaster each day to provide several hours of persistent cover over the venue and on the roadway from Glasgow to Edinburgh (where President Biden and others were staying) before returning at the end of the day. Quite where that left the units ability to operate a normal law enforcement air service to the people of the North East is unexplained. Fortunately the true VIPs moved on after a few days and the level of air support required on the roads between Glasgow and Edinburgh dropped off proportionately.



Nominally the air support for COP26 amounted to the two operational police fixed wing aircraft, supported by Gama Aviation and the Signature FBO and the Police Scotland H135 but there was additional short-

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The COP26 centre of operations in Glasgow was extensive ©COP26

term US military presence while the President was in town and throughout there was a military presence provided by four Puma helicopters from RAF Benson. They arrived in Glasgow on October 28 and left on November 15. XW213 “Alleycat 1” ZA940 “Alleycat 2” ZJ954 “Alleycat 3” ZJ955 “Alleycat 4” routed back to RAF Benson via Blackpool on departure as the finale for COP26, perhaps the most intensive bit of aviation turning and burning in Britain this year.

BOTTOM LINE

What are the economics of keeping on the hangars at Doncaster and North Weald now that their duties have been cut back?

NPAS Doncaster, a 1.368 acre site, was originally designed for 4-6 fixed wing observation airframes supported by a 24/7/365 maintenance contract agreed with Gama. With the based and operating aircraft now scaled down to two airframes primarily operating for 12 hours all the financial parameters will have changed. NPAS may well be paying Gama the original agreed amount but when the contract renews it will be a time to ensure that good value remains.

The original contract agreed in the first quarter of 2017 was for three years with an optional two year extension period which suggests that the contract is up for renewal early next year.

NPAS North Weald is a similarly sized (circa 1.368 acre) site originally designed to house four helicopters and a fixed wing. It now serves as the home of just one EC135T2 and is therefore substantially too large. The locals are happy though, with only the one EC135T2 operating from there the frequency of flying from the North Weald base has plummeted.

If money saving is an important mantra in NPAS these two bases need disposing of. It seems that little thought was given to the consequences of halting the power by the hour on maintenance of the Airbus fleet, promoting senior police officers in post and seeking to employ an expensive Mystic Meg of a future projects figure so ridding themselves of the oversize sheds should be a priority.



The North Weald hangar ©BE

UNITED STATES

ARIZONA: Just over a year ago, in September 2020, the Pima County Sheriff's Department announced that it was spending more than \$7M to buy two new Cessna 208 fixed wing aircraft and new surveillance equipment to enhance the capabilities of the Sheriff's Department.

At the time the department had a twin engine aircraft for prisoner extraditions and a helicopter mainly used for rescue missions, the majority of the airborne law enforcement and surveillance relied on two single engine Cessna aircraft. They cost much less to operate than the helicopter, but they were getting old and that increased downtime and the cost of repairs.

The older 1999 Cessna's will stay in the fleet but will be relocated to another part of the state where they are not required to fly so often.

In October the first of the new airframes, N671AZ, c/n 20800671, a newly built airframe registered in August was officially introduced to service. The second aircraft is expected to be finished at the end of this year.

CALIFORNIA: Several helicopters representing law enforcement, fire, the military and private operators were the focus at the 2021 American Heroes Air Show on November 13 held near Los Angeles at the Hansen Dam Recreation Center in Lake View Terrace.

The helicopter focussed event also included a career and recruiting expo, an emergency preparedness fair and opportunities to take a ride in a helicopter. There were aerial demonstrations of hoist rescues and water dropping for fires, a procession of restored vintage emergency, fire and police vehicles and the Los Angeles United States Citizenship and Immigration Services hosted a naturalization ceremony for new citizens. [LAT]



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MICHIGAN: Flint Police Department finally took delivery of its leased helicopter in late October 2022. The helicopter is a standard 2016 built Robinson R44 N803PT. The craft is registered to Heli Good Time LLC an operator with no known prior police customers based in Chesterfield around 50 miles east of Flint.

Elsewhere in Michigan the Saginaw County Sheriff has grown more reliant on newer drone technology after many years of low



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key operations of fixed wing aircraft. The sheriff William Federspiel believes they cannot afford a helicopter. They have a drone and can put it up in the air fast, and believe that the technology it offers with forward looking infra-red, is everything that a helicopter offers at a cost around \$30,000 funded by a Department of Justice grant. They hope to get another soon when the funding is available.

One of the senior officers with the Sheriffs office, Robert B. Phelps joined the Aviation Support Division of the Saginaw County Sheriff's Office in January of 1976 when it was primarily a light fixed wing operation. Light aircraft remained available into the 21st century but meanwhile Phelps had moved on to other projects within the Department, received several promotions and his involvement with the aircraft has now been set aside in favour of Information Technology in the last fifteen years.

NEW MEXICO: The city council are looking anew at whether the air operation of Albuquerque needs to retain its low tech Cessna single. The unit was set up on the use of light single aircraft and they have retained just one as a low cost general surveillance tool.

Units across New Mexico spend millions of dollars on pilots, TFOs, fuel and maintenance for high-tech helicopters and the retention of the Cessna is seen as something of an anachronism.

Albuquerque City Councillor Pat Davis, a former police officer, points out that a well equipped police aircraft is an important option for officer safety but he does not understand why the air unit sees continued use of the Cessna an option. Air 5, a 1981 Cessna Skylane, N9958H has been patrolling the skies over Albuquerque for decades and Davis thinks it's time for a final flight by the asset.

The plane once sported a FLIR (forward-looking infrared) camera but long ago the manufacturers declared that it was beyond economic repair and the aircraft no longer carries that useful equipment. The Cessna now only relies on the eyes of its crew and some stabilised binoculars although they still have a working Lo-Jack vehicle tracking system. To replace the previous FLIR with even a refurbished unit would cost in the region of \$400,000 – more than the cost of the airframe.

The department's two helicopters – known as Air 1 or Air 2 – offer an array of high-tech equipment including a modern camera system slaved to a searchlight and mapping system.

Looming is the need for a new engine for Air 5 and that has highlighted the cost of the asset contrasted to the airborne law enforcement capability. Those on the unit believe it is a useful tool but selling it and its low technology to those holding the purse strings is difficult.

In the past year Albuquerque police paid \$48,070 in fuel and maintenance costs to enable the aircraft to fly 178 times in the period. The department credits the plane with 50 felony arrests and the recovery of 42 stolen vehicles in 2021. APD insists the plane is a valuable backup to its two helicopters. The department has three pilots who can fly either the plane or a helicopter. An additional pilot is only rated for the plane, and one more pilot is only rated for the helicopters.

Davis believes the city should lean more heavily on its own mutual aid agreements with Bernalillo County and the New Mexico State Police. All three agencies have aircraft based at Albuquerque's Double Eagle Airport. In fact, the city and county routinely attempt to stagger their patrol shifts to maximise aerial coverage over Albuquerque. The air unit disagree and believe having an in house air crew that know local policies and mission requirements is important. While Air 5 is low-tech, it's also significantly cheaper to operate and easier to train pilots to fly.

Editor: This kind of issue is international. Fifty years ago everyone was happy to accept air support using simple aircraft that required the use of eyesight and binoculars but now there is a trend towards grounding aircraft simply because the EO/IR sensor is unserviceable. Such sensors are expensive and carrying a spare is rarely an option but grounding rather than declaring the aircraft to have limited capability is wasteful. On the one hand there is often a specification requirement to allow the crew to have eyes out viewing [as in tenders that have been issued that specified a high wing design rather than low wing] and then some declare that the human eye is not good enough. It does not make sense.

TEXAS: The USA has its own problems with cameras and surveillance, EO/IR cameras have long triggered strong reactions – there are restriction often backed by the US courts that make operating aerial cameras difficult at times. Add drones to the mix and a whole new paranoia emerges.

Last month a magazine called Wired based in Boone, Iowa, ran a story highlighting the emergence of 1.8 terabytes of stored video footage originating from the helicopter fleet of the police department in Dallas, Texas and the Georgia State Patrol in 2019. It seems the footage was stored insecurely in the cloud and

it has been leaked. Clearly having the footage in the public domain is embarrassing but for no clear reason the publication linked the helicopter footage to drones, potentially because drones ramp up the temperature in public perceptions.

A group of activists posted the leaked footage on its website and therefore easily accessible to the public. In June 2020 the same group was involved in publishing a range of law enforcement data and documentation stolen by a hacker.

Wired magazine appears to be pushing this agenda to heighten the public's fear of drones – even though the footage is patently not from drones. Naturally the footage is of people and places and potentially retained for evidential purposes, primarily for the courts. Faced with the legal and perception difficulties there are standing orders to avoid taking views of private property unless it has already been identified as the scene of a felony, or if there is a warrant in existence. As aircraft fly perhaps 2-3 hours a day it is far less intrusive than the footage gathered by 24/7/365 CCTV cameras but there is no story in terrestrial camera footage, cloud stored or not.



The editorial team at Wired claim that “The leak illustrates the inherent risk of collecting and retaining sensitive footage that could be breached.” The allegation appeared to be partly deflected by the Dallas Police Department DPD public information officer Brian Martinez. He commented that “All video from the helicopter is available to any person requesting the video through the Open Records Act.”

Ed: Quite a nasty little set of allegations. Wired upped the storyline by claiming that the ‘random surveillance’ showed ‘highly detailed and zoomed-in images of people in their front yards, standing by their cars and sunbathing.’ Mixed metaphors there, it is either random or zoomed in. Then of course it was time to point out that infrared technology can look at people inside buildings with thinner walls. The Dallas Police Department clearly has technology not available to any other agency in the world. Go study your physics. There is a suggestion that police departments should make retention limits a priority, this footage is only two years old and well within sensible retention periods.

Also ramping up the temperature are allegations of low flying helicopters and video being used for intimidation purposes, over neighbourhoods ‘where residents are predominantly people of color.’ The evidence for that level of detail is of course absent from the footage, that is pure imagination and prejudice on the part of the writer. Perish the thought.

Public safety organisations in the U.S. are all too well aware of the dangers of failing to pander to such ill-informed public opinion. They avoid mentioning the term “surveillance” in the same sentence as “drones,” it is just too sensitive.

Although there is a drone unit in Dallas it has built up only slowly and at the time of the article had not been approved for operation. The Dallas PD Mission Statement on the use of drones states:

“The UAS Squad will support public safety by providing a safe and efficient aerial observation perspective on law enforcement, fire, and other public safety incidents. The UAS Squad will provide de-escalation tactics, transparency, and increased officer and citizen safety during challenging situations. Missions will be accomplished efficiently and safely while respecting the law and the privacy of the citizens being served.”

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AIR AMBULANCE

CANADA

ONTARIO: Bluewater Health is a 326 bed hospital in Sarnia, Ontario. It was opened October 3, 1896 as Sarnia General Hospital and was the community's first public hospital. In 2010, with extensive renovations to the two existing buildings and construction of a third, it was renamed Bluewater Health.

The construction timeline for Bluewater Health's helipad project is on track following recent survey results.

Geo-technical surveys and soil sampling was done during this past summer, commencing July. The results returned are fine and plans are still in place for demolition to start in the spring of 2022. The build portion of the project is expected to take place in the summer with a completion target set for the autumn of 2022.

The next phase of community consultations will likely take place in the spring to provide an update on specific steps regarding the build portion of the project.

Lambton County Council approved funding of up to 50% of the capital cost in its 2021 budget. The expectation is that the Bluewater Health Foundation is raising the remaining \$400,000 needed.

The hospital purchased the land from the St. Clair Catholic District School Board in 2016 following the closure of the former St. Patrick's High School.

EUROPE

Europe is entering renewed lockdown in Covid-19, the Netherlands shut down its population in mid November, a military exhibition in Antwerp scheduled to run on the same dates as the European Rotors event in Germany, was deferred DRF Luftrettung were scheduled to provide a presentation of expertise from almost 50 years of air rescue from 16 to 18 November 2021, at European Rotors in Cologne to present their technical, aviation and medical portfolio but that was halted just before the event. They were to headline their newly developed collision avoidance system and the fleet's latest member, a red-and-white five-bladed H145.

DRF wanted to have all of their personnel and technical resources fully available to fulfil the primary mission out of the exhibit halls. As a result all of the technology presentations envisaged for the event in Cologne have been deferred to another venue.

Europe has not taken well to the threats of lockdown, Austria followed The Netherlands, and some localised rioting was reported. It may get worse of course as South Africa reported finding another unknown variant and the world recoiled in horror. Apparently it is rife in the UK, with a total of eight cases by November 28 and the other 68 million population is allegedly gripped in fear!

NEW ZEALAND

A handful of rescue helicopter pilots and medics are resisting getting vaccinated and will be out of a frontline job. There are hopes that they will be reassigned and that there will be no impact on patient services.

Philips Search and Rescue Trust, which runs four bases that cover the lower North Island, is talking to four or five staff out of 110, the management are explaining to them that it's their choice, but that they will not have them serving on rescue helicopters when there is injured or unwell patients on board.

It's a similar story at the Northland Emergency Services Trust that covers Auckland and northwards. It is back to flying eight missions a day, after a lull over the first six weeks of lockdown. A small number of frontline staff were waiting for vaccine alternatives. In their case it is not a case of them being anti-vaccine. Jobs may still be lost but only if an alternative post does not present itself.

Over at GCH Aviation who runs the rescue helicopters on South Island only one person does not want a vaccination, its partner in the service, Helicopters Otago said all its pilots and medics were double-dosed with the vaccine. [RNZ NZ]

www.policeaviationnews.com
Emergency Services First



UNITED KINGDOM

CORNWALL: In October Castle Air were displaying a Leonardo A109 G-KRNO at the Helitech Show in London and declaring they were seeking to bid on air ambulance contracts. They would not be led on who the likely customer was although there were indications in the registration they had chosen – Kernow is a Cornish word and a variation has been used on an earlier helicopter used by Cornwall Air Ambulance.



Late in November Cornwall Air Ambulance announced that it has appointed locally based Castle Air as its helicopter operations partner. The Liskeard-based company will be responsible for the ongoing maintenance and engineering of the charity's Leonardo AW169 helicopter. Castle Air has over 40 years' experience in the management of aircraft and is an Approved Leonardo Service Centre. It operates and maintains several Agusta/Leonardo helicopters for the provision of Helicopter Emergency Medical Services (HEMS), VIP Charter, Aerial Surveillance, Passenger Transport and Training services. The AW169 helicopter (G-CRWL) is now with Castle Air for routine annual maintenance. During this time, the crew of Cornwall Air Ambulance will be responding to incidents in the back-up helicopter (G-KRNO), to ensure they can continue to reach the most seriously sick and injured patients in Cornwall and the Isles of Scilly. Ross Bunyard, Managing Director of Castle Air, said: "We are very proud and excited to be supporting Cornwall Air Ambulance Trust through the operation and maintenance of their helicopter. We have wanted to support our local air ambulance for a long time, and we are very grateful to the charity for this opportunity, which is allowing us to expand our capability at Liskeard and employ additional maintenance staff. We are looking forward to supporting the charity in their provision of the air ambulance service for the people of Cornwall."

Editor: Since the air ambulance operation commenced in Cornwall on 1 April 1987, Cornwall's air ambulance was the first dedicated HEMS operational in the United Kingdom operating variants of the BO105 until 2000. In that year they took on an EC135T G-KRNW provided by Bond/Babcock for 14 years. In recent years they have used Specialist Air Services (SAS/PAS/MAS) in Staverton, they are just one of several UK air ambulances that have turned their back on SAS in recent months.

FIRE

AUSTRALIA

NEW SOUTH WALES:


As the Northern Hemisphere enters the relative safety of the winter season the Southern Hemisphere winds up for a hot fire summer. In mid November Central Coast Airport it was announced that Warnervale the base for a firefighting helicopter for the bushfire season has a Bell 214 and that it will be operating from there until February 2022.

NSW Rural Fire Service Assistant Commissioner, Ben Millington, said the Bell 214 has the capacity to carry 2,000 litres of water and will be used to help contain bushfire outbreaks across the Coast

EUROPE

This year Babcock the aerospace, defence and security company has flown more than 5,500 missions and more than 11,000 flight hours across its global leading aerial firefighting and fire prevention operation, dropping approximately 200 million litres of water to fight wild-fires in Spain, Portugal, Italy and Canada.

With more than 35 years of experience in aerial firefighting, Babcock can rely on the skills of around 500 rigorously trained professionals to operate its 50 strong fleet of light, medium and heavy helicopters and fixed wing aircraft along with managing the Italian Government's 19 amphibious Canadair. During a drier than normal summer, with temperatures that set historical highs, operational teams in Spain helped to ex-



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tinguish more than 20 big wild fires, with burn areas of approximately 500 hectares each. A summer season declared by experts as one of the most complex from recent years, in which Babcock has incorporated new technology to fight fires, like the five Super Puma heavy helicopters modified and upgraded to extinguish fires in Spain.

While in Italy, fires have increased by 256% this year and over 150 thousand hectares of forest were burnt. The firefighting season was very demanding for our crews in Italy, where Babcock is operating and maintaining the Canadair fleet of behalf of the Government. Our crews deliver more than 2,100 missions and over 6,000 flight hours, with a record number of flight hours flown in a single day. In 2018, Babcock was awarded a 10-year contract for delivering aerial wildfire suppression services by the Government of Manitoba. As part of that contract Babcock manage, maintain, and operate Manitoba's fleet of seven Canadair amphibious water-bomber aircraft, supported by three Babcock-owned bird-dog aircraft. In 2021 alone, Babcock successfully dropped over 53 million litres of water on the wildfires in Manitoba and also completed over 874 firefighting missions.

Summer 2021 was a challenging time operationally, with wild fires across Spain, Portugal, Italy and the Mediterranean countries. Despite the challenges our highly trained and experienced teams are ready to intervene, deploy innovative technology and focus on prevention or extinguishing the threat to the forests and local communities." [Babcock Statement]

SPAIN

Helitrans Pyrénées S.L. took delivery of its first Bell 429 in March 2021. Renowned for its class-leading capabilities and flexible platform, the Bell 429 has enabled the Spanish operator to expand into special missions such as search and rescue (SAR) and firefighting.

Helitrans have a public contract with the government of Catalonia, which requires twin engine aircraft for search and rescue missions. The 429 offers outstanding performance, the power limitations usually associated with using a twin-engine helicopter are eliminated. They have three pilots with a type rating for the Bell 429, each training at the Bell Training Academy in Valencia, on a specialised 429 simulator.

The aircraft is primarily used for search and rescue, however Helitrans is also expanding into the firefighting mission as wildfires become more frequent and unpredictable in Spain. It is already using the 429 to transport firefighters to rescue people, and in the future, it will use the 429's cargo hook to transport water for fire extinguishing. Based at the Andorra-La Seu d'Urgell Airport, the Bell 429's impressive range means the company is able to cover a large area in Catalonia.



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SEARCH & RESCUE

IRELAND

COAST GUARD: The definitive report investigating the fatal accident befalling a Sikorsky S-92A helicopter, registration EI-ICR (call sign Rescue 116), which was being operated by a private operator on behalf of the Irish Coast Guard (IRCG), on March 14, 2017 was published early last month.

With a report that is contained within some 350 pages and requires a 12 page summary, and puts forward forty two Safety Recommendations as a result of the Investigation. Clearly little of the flavour of the causes can be covered here. At best I can only point out some salient elements.

Rescue 116 was en route from Dublin, on Ireland's east coast, to Blacksod, County Mayo, on Ireland's west coast. The Flight Crew's intention was to refuel at Blacksod before proceeding, as tasked, to provide Top Cover for another of the Operator's helicopters, which had been tasked to airlift a casualty from a fishing vessel, situated approximately 140 nautical miles off the west coast of Ireland at night. At 00.46 hrs, on 14 March 2017, while positioning for an approach to Blacksod from the west, the S-92A, which was flying at 200 feet above the sea, collided with terrain at the western end of Black Rock and crashed into the sea killing all four crew. <https://www.gov.ie/ga/preasraitis/85...-air-accident/>

In among the many words it becomes clear that the investigators agree that for various reasons Black Rock was invisible to the navigation system, the terrain avoidance system and the crew. The aircraft was equipped with instrumentation suitable for use with night vision goggles but the crew were not provided with NVIS Goggles and never had been.

In 2020 Irish Government auditors highlighted the lack of night vision aids for crews operating their Coast Guard helicopters. The S-92As provided by CHC after a public tender for a period of ten years (July 2012 to June 2022), with possible extensions for up to three further years. The contract has been extended twice, and is now to run up to 2024.

Prior to the commencement of the tender process, a report prepared in March 2010 recommended that the helicopters used to provide the SAR under the new contract should be fitted with a 'night vision imaging system' (NVIS). It was further recommended that night vision goggles and crew training should be provided when funding became available.

The 2012 contract specified that the Department would make a payment of €4.305M or €861,000 per helicopter for future modification of the proposed fleet to accomplish NVIS compatibility. The helicopter modification phase commenced in 2013, and the Department paid €4.305 million to the company in that regard. This included the implementation of night vision modifications to the cockpit avionic systems, rear cabin lighting and external lighting. This phase was completed in 2015. The new helicopter brought into service in 2015 was modified for NVIS prior to arrival for operation. €527,000 was paid to the company in November 2015 for the purchase of 24 sets of night vision goggles to be owned by the Coast Guard beyond the expiry of the existing contract with CHC. Several other payments were made to advance the modification and training package.

Time was the enemy, each stage of airframe modification and crew training process took inordinate periods of time. Training on use of the NVIS and of the goggles commenced in November 2019, and is still ongoing though increasingly delayed by Covid 19. Concerns were expressed at the considerable elapsed time between the purchase and installation of night vision equipment and the provision of requisite training in the use of the equipment.

The crew of Rescue 116 did not have access to goggles on the night and recordings of their conversations in the final seconds of flight indicate that the pilots had limited vision from the cockpit. Too late the rear crew could see the approaching mass of the rock, and too late the unseeing pilots reacted to the warnings.

Editor: From a straw poll it appears that the levels of take up of NVGs across the airborne emergency services is relatively low and the in-service training on the devices is patchy. Who would even be capable of selecting or interviewing an NVG expert and trainer?

Very little real research into the type of NVG appears to take place – in many cases it is the fortuitous arrival of a former member of the military with some tenuous knowledge of their use in a unit that is grasped upon. Such individuals are quickly elevated to the level of expert and trainer even if they have never acted out either task in their former lives. As a result the choice of equipment and training techniques can rely wholly upon one persons experience regardless of whether that is good or bad. Meanwhile, industry

has companies offering training and selection services that are often rejected as too costly despite this being an important flight safety aid.

Irish Air Corps (IAC), based at Casement Aerodrome, Baldonnel Co. Dublin, Ireland, recently continued ongoing NVIS training with Aviation Specialties Unlimited (ASU). For more than a decade, ASU has supported the IAC night vision training programme. In February, ASU was awarded a two-year training contract for IAC aircrew night vision equipment training.

This included ground training and flight training in their Agusta Westland AW139 and Airbus EC135. They completed upgrade training for several IAC instructors to become NVGIs (Night Vision Goggle Instructors) and NVGEs (Night Vision Goggle Examiners), enabling IAC to conduct training and perform examinations internally.

The first training contract was awarded in 2008, and in 2010 ASU completed initial training for 75 pilots and crewmembers and six Night Vision Goggle Flight Instructors.

The IAC provide crews for the support of Ground Defence Forces, Naval Service, air ambulance services, disaster relief, fire fighting and pilots for An Garda Siochana (National Police Service of the Republic of Ireland), among other duties.

MALTA

ARMED FORCES: The long serving Britten Norman BN-2 Islander twin used for search and rescue missions has been undergoing maintenance at the manufacturers facility a Lee-on-the-Solent in Hampshire. The Islander AS9819, formerly 9H-ADF was delivered as a piston powered PB-N2B-26 in 1998 and rebuilt as a turbine powered PB-N2T in 2010.



The AFM Islander in its original form ©PAR

In March this year the company signed a contract for a new significant upgrade to the aircraft to install a new Garmin G600TXi glass cockpit, with the GTN750Xi and GTN 650Xi NAV/COMM/GPS. The Garmin G600TXi provides a cost effective and practical solution to upgrading the Islander and is a modification available through Britten-Norman for both the piston and turboprop variants. Also to be installed is the latest addition to the Garmin avionics suite, the GI275, an extremely versatile multi-function display that can act as a primary or, as in this installation, as a reversionary secondary display with integral battery. The GI275 is also available for both piston and turboprop Islanders and can be reconfigured as an HSI or as an electronic engine instrument.

These improvements to the Islander bring the aircraft to the very latest operating standard and will greatly enhance the aircraft's core capabilities. Coupled with the Genesys System 55X autopilot, the Garmin G600TXi can be configured to provide automatic search patterns for Search & Rescue operations, reducing pilot workload and providing dramatic improvements to mission success rates.

The powerful electronic touchscreen flight instrumentation will replace existing analogue gauges. This will reduce maintenance costs as well as providing greater access to aircraft performance data and operating parameters.

Other elements of the mid-life update will include a full deep maintenance check, upgrade to the interior with an all-new UK designed and manufactured trim kit, seat and upholstery refurbishment and a full refinish of the aircraft exterior.

Captain Christian Grech, said; “The Armed Forces of Malta have operated Britten-Norman Islanders for over 25 years. The BN2T Turbine Islander is integral to our coastal search and rescue operations, fisheries protection and other land/maritime security operations. With the aircraft’s stability, low-speed handling and endurance, the Islander is an essential asset which will continue to assist in maintaining the integrity of the Maltese waters. In recent times, flight display and engine information systems have advanced significantly. We are confident that acquiring these sophisticated avionic systems will positively impact our specialist operations and minimise the pilot’s visual workload.”

As part of the contract Britten-Norman will be sending staff to Malta GC to provide updated training on the type to the AFM maintenance teams. [social media]

Ed: It seems fair to assess that AFM have been the recipients of some amazing good value from their fixed wing experience with this classic police air support airframe over the past 25 years.

NETHERLANDS

ST Airborne Systems AB based in Sundbyberg, Sweden have delivered the second SLAR and IR/UV system for the Netherlands Coastguard to PAL Aerospace who is installing the systems onboard two DHC-8 aircraft. ST Airborne has a long history of supplying similar systems to fit out sea surveillance aircraft for Swedish and international customers.

PAL Aerospace will together with Jet Support based at Schiphol Airport support the operation of the aircraft for a 10-year period for the Netherlands Coastguard with an option to extend for two additional one-year terms.

UNITED KINGDOM

MIGRATION: With Migrant traffic across the English Channel this year already exceeding 25,800, our ambassador to the *BBCs Question Time* [he has had an inordinate number of appearances this year] and Migrant Watcher extraordinaire Tony Cowan has briefly given up writing to *Police Aviation News*, *The Daily Telegraph*, *the Home Secretary* and all points in the Eastern Approaches to write to the top of the pile. Boris Johnson the Prime Minister. He has graciously supplied a copy of his appeal to Boris for PAN readers...Most of the others failed to reply to him and I do not suppose the PM will have much time anyway. You can but try. The content will be familiar but it may be the reaction that matters. Although there is a perception that nothing seems to be getting done in this area of politics the few days since the letter was written have been quite frenetic and involved mud slinging and what passes for action on the Channel coast.

A letter to the British Prime Minister - The Rt Hon Boris Johnson MP 22 November 2021

Dear Prime Minister,

By the time you read this letter, the number of migrants who have entered the UK in small boats without permission will, most probably, have exceeded 25,000 in less than a year (1); 3 times the total for 2020! As you know, in 2020 the total was some 8,461, in 2019 it was 1,850 and in 2018 the total was just 299. In the intervening years the inflatable boats have increased in size. Earlier this month many will have seen, on television and in the press, up to 40 migrants manhandling one of these very large purpose-built boats, 50 feet in length, across a beach near Wimereux in northern France, in broad daylight, whilst the French police looked on!



My own expertise is in aviation, first in the RAF where I was the captain of a maritime patrol aircraft, the BAe Nimrod. Then, more recently, as a police pilot with the former North East Air Support Unit and as a pilot with the Scottish Air Ambulance Service. Therefore, as you may imagine, I share your “exasperation” when, despite the best efforts of the Border Force, HM Coastguard and others, thousands of migrants stream across the English Channel with apparent impunity in overloaded inflatable boats after purchasing a ‘ticket’ from a criminal, from a people trafficker. This is, without any doubt, an illegal, commercial operation which, to some extent, the French government has condoned.

So, after trying several initiatives, with aircraft and with patrol boats, initiatives that, clearly, haven't worked, we may agree that some new ideas are required. We may also agree that, alongside any ongoing criminal investigation, this 'war', between the people traffickers and the governments of the UK and France, can only be won in Europe and, in particular, on the beaches of Belgium and northern France.

May I recommend a new policy of 'deter and detect'. Persistent air patrols, between Dunkirk and Boulogne-sur-Mer, would be part of this new strategy, in addition to secure reception centres and offshore processing.

The objective of overt, persistent air patrols would be, first to deter the migrants from setting sail at the point of departure and second, to report any gatherings of migrants with inflatable boats. Although patrolling the coast of northern France may be very difficult on foot, in a light aircraft it would take just 30 minutes! Moreover, although sophisticated radar and equally sophisticated acoustic systems may be required to hunt down submarines from the air, spotting migrants attempting to launch an inflatable boat requires no more than a pair of stabilised binoculars or, at night, a pair of night vision goggles.

How would I know this? In addition to my service with the RAF, together with service as a police and as an air ambulance pilot I'm also a Winston Churchill Fellow. My Fellowship provided me with the opportunity to study voluntary sector air support organisations in the USA, in particular the US Civil Air Patrol and the US Coast Guard Auxiliary (Air). Both organisations are tasked with Homeland Security missions. Unfortunately, the UK has yet to fully embrace the idea of volunteers supporting the emergency services with light aircraft, for air observation, the proverbial 'eye in the sky' to patrol the UK's extensive coastline, together with air to ground photography. Also, with permission, the coastline of northern France. Nevertheless, Kent Police recently promoted a new initiative, 'aviation community support volunteers', to utilise the expertise of volunteers with private aircraft.

We may agree that the idea of overt, persistent air patrols over the beaches of northern France is worthy of further consideration as, to date, the current tactics, at sea and in the air on the UK side of the English Channel have proved to be totally ineffective. Of course, taking action on the French side of the Channel will require international cooperation, the same cooperation that is evident on the border between Belarus and Poland. If it were necessary, would it be possible to invoke Article 4 of the NATO Treaty to protect territorial integrity and border security?

Yours sincerely,

Tony Cowan

James A Cowan MBE BA CF FRIN
Squadron Leader
Royal Air Force (Ret'd)

Authors Notes:

1. In the month of November a total of 6,878 migrants were reported to have arrived in the UK without permission after crossing the English Channel in small boats, the highest figure recorded in one month. This brings the total to 26,560 in the current year.

2. The alternative to the recommended tactic of 'deter and detect', with light 'spotter' aircraft supporting foot patrols and patrol boats operating close inshore, the current UK Border Force tactic, with aircraft and drones, is that of 'observe and report'. In the case of 'observe and report' the UK Border Force, together with HM Coastguard and the Ministry of Defence have deployed a range of aircraft, including the diminutive Tekever AR5 Evolution Mk2 drone and the very large Airbus A400M Atlas transport aircraft, together with HM Coastguard Beechcraft King Air and Piper Navajo patrol aircraft, to report sightings of boats carrying migrants once they've entered UK waters so that the occupants may be 'rescued'.

3. On the morning of Wednesday, 24 November the long anticipated disaster in the English Channel occurred when a large inflatable boat carrying up to 30 migrants capsized. With no immediate rescue available, 27 migrants, including 7 woman, one of whom was pregnant, and 3 children lost their lives and one person was reported to be missing, although there is some doubt as to the true total. This follows 2 near disasters on the 10 and 23 of October 2021 when 38 and 39 migrants were rescued from 2, very similar, large inflatable boats shortly after departing the French coast. This most recent, tragic loss of life is the greatest number of people who have perished in one incident since a family of 5 migrants died at sea, with a further 2 missing, near Dunkirk in October 2020. However, without any reliable records, there is no means of knowing the total number of migrants who may have died and disappeared without trace whilst crossing the Channel in an open boat.

#

4. Following the tragic loss of 27 lives in the Pas-de-Calais on Wednesday, 24 November a meeting of European officials from Belgium, France, the Netherlands, Germany and the European Commission took place in Calais on Sunday, 28 November. This meeting should have included the British Home Secretary, Ms Priti Patel MP, but she was stopped from attending by the French President, Emmanuel Macron after the British Prime Minister, Boris Johnson made public a letter sent to President Macron on the 25 November. This letter called for greater cooperation between France and the UK to combat the people traffickers with joint patrols in the air, at sea and on beaches of northern France. As an alternative, those attending the meeting in Calais agreed that the European Border and Coastguard Agency (Frontex) would send 'a plane' to help combat people trafficking in the Channel starting on Wednesday, 1 December 2021. Whether one aircraft will make a significant difference, or whether it will prove to be too little, too late remains to be seen.

I think we can assume that Tony's letter to the Prime Minister on November 22, calling for more action on the French side of the English Channel and more aircraft patrols did not lead to the addition of the Frontex resource. However there may be changes afoot. The French are now making proposals.... It is not how you say it, it is who says it last.



INDUSTRY



AS350/H125 ©Airbus

The recent performance increase of **Airbus Helicopters'** single-engine H125 helicopter has received certification from both the Federal Aviation Administration (FAA) in the U.S. and Transport Canada (TCCA) in Canada, making it now fully certified and available to all North American customers. This major evolution includes multiple benefits for H125 operators, including an increase of the external and internal load lifting capabilities by up to 308 lbs. (140 kg) and an increase of the hover ceiling out of ground effect (OGE) at maximum take-off weight. They come from an increase of up to 10% of the aircraft's power by making full use of the available power of the current Safran Arriel 2D engine, which is managed through a software update of Thales'

Vehicle and Engine Multifunction Display (VEMD) featuring enhanced engine limitation laws and updated performance calculation. "The H125 is a best-seller in the region and Airbus Helicopters continues to make the necessary product evolutions in line with the needs of the market and customers globally," said Romain Trapp, president of Airbus Helicopters, Inc. and head of the North America region. "The extra power and resulting payload increase offered by this major upgrade mean a significant operational advantage for the critical missions our customers perform every day, especially for firefighting and aerial work. We're proud to have the H125 working to accomplish industry expectations in terms of performance and value." This increased performance will be included as a standard feature on new H125s entering production in North America as of March 2022. A retrofit solution consisting of a VEMD software upgrade is also immediately available directly from Thales via an in-shop retrofit or a standard exchange. The H125 power increase is also certified by the EASA, National Civil Aviation Agency of Brazil, the Federal Air Transport Agency of Russia, as well as by several other airworthiness authorities worldwide. With more than 1,365 helicopters in the H125 family in service in North America alone, the H125 continues to lead the intermediate single-engine helicopter market in all mission segments thanks to its high performance and multi-mission capacity. In the last 10 years, half of all the intermediate single-engine law enforcement helicopters delivered in North America have been an H125, and the H125 also accounts for nearly half of

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all intermediate single engine utility helicopter operations in North America. Airbus Helicopters North America is the leading supplier of helicopters in the U.S. and Canada, with a team of 1,000 employees supporting a regional fleet of more than 3,200 helicopters flying for some 800 customers across the region. [Airbus Helicopters]

In the February 2021 edition of PAN it was reported that Bassetlaw District Council located in and around Retford, Nottinghamshire had a local planning proposal under discussion that affected **Gamston Airport**. The airport is currently the home of several businesses including DEA Aviation an international border security ISR operator. They fly a mix of Diamond DA-42 and DA-62 aircraft on border security flights including those for FRONTEX.

The airport is one of two garden village sites named by the Bassetlaw District Council draft local plan which is expected to curtail aviation at Gamston Airport. It appeared from the initial story that the future of the airport was in doubt.

Planning permission has now been granted for Thatcham Research to build a driverless car testing centre at Gamston. The test centre will take over six hangars currently used by private aircraft and the main runway will be shared with aviation.

Thatcham Research boss, Mr Jonathan Hewett, said the purpose of this proposal would be to use Retford Gamston Airport's facilities to research the safety of automated vehicles and self-driving cars. Mrs Jo Allen from DEA Aviation, spoke in favour of the application saying the proposals would provide employment and training programmes for people who wish to get into aviation, and that DEA Aviation has established a good working relationship with Thatcham Research and is well positioned to support them with robust operational procedures.

Aviation will continue at the site, a licensed runway will be maintained and provide storage for aircraft. The CAA have already said dual operations can work and developing the means to deliver this will be a priority.

The proposals to close Gamston brought forth numerous objections. The airfield offers one of the few paved runways in the immediate area and it supports several important industrial units including the ten surveillance aircraft operated by DEA Aviation, mainly on Frontex border surveillance across Europe, the trainers of Gamston Flying School and Kuki Helicopters, and industry. Radiola Aerospace specialise in aeronautical navigation aids, flight inspection and flight navigation and provide services to military and civil aviation customers. In addition to the businesses the airport has 11 hangars, is home to 100 aircraft ranging from a small 2 seat Cessna training aircraft to private jets. Gamston has 5,522 feet long asphalt runway with lighting, larger and heavier jets are able to operate in wet weather and at night. The Children's Air Ambulance is also based there showing the airfield's capabilities and usefulness to the industry. [ABN]

Spectrum Aeromed has announced it is partnering with Uniflight Global on multiple AW119Kxi interiors, with installation beginning in January 2022 for two HEMS flight programs. Key features of the interior will include a 10 Litre LOX oxygen supply, patient pivot loading system from the left side, two forward facing medical attendant seats and one aft facing medical seat, medical mounting options on the ceiling and back wall, and valance panels for all radios, controls, and outlets. The project includes a total of six sets of custom equipment built for Life Link III of Minnesota and Mercy Flight of New York. All six custom interior installations have planned completion dates in 2022.

In early October **ST Airborne** in Sweden performed a Critical Design Review (CDR) with Transport Canada for the new MSS 7000 system they have ordered. The MSS 7000 is the new generation maritime surveillance system following on from the MSS 6000. It is built for real time monitoring of sea surface activities. Typical missions include: General surveillance for protection of the Exclusive Economic Zone, oil spill tracking, border control, fishery surveillance, ship traffic control, search and rescue.

The new MSS 7000 system to be installed has dual workstations and integrates SLAR, IR/UV, AIS, cameras and Direction Finder as well as a new EO/IR with HD capability and a new advanced search radar. The contract also includes an upgrade of the mission systems on board the three aircraft already in operation (two Dash 8 and one Dash 7).

This is the latest in systems that have been developed over a period of more than 40 years in close cooperation with our customers including the Swedish Coast Guard and Finnish Frontier Guard. Systems are in use with Coast Guard operators worldwide. Earlier this year ST Airborne received another order for a long-standing customer, the Indian Coast Guard. Hindustan Aeronautics (HAL) in Kanpur will equip another three of the Dornier 228 aircraft operated by the Indian Coast Guard with our system. The system will include a new SLAR, IR/UV and cameras supplied by ST Airborne Systems before training commences.

Since 2009 the Indian Coast Guard is already operating three of our systems and now all six aircraft will be able to cooperate. We look forward to working with HAL to provide the Indian Coast Guard with this augmented capacity to survey the busy oceans around India.

The system for Canada is slowly taking shape in the face of Covid 19 related delivery delays and should make the Factory Acceptance Test in early 2022.

Bell Textron Inc., have entered an agreement with Arrow Aviation to sell the HELIFAB Emergency Medical Kit configuration for the Bell 505. In addition, Arrow Aviation also signed a purchase agreement for their fourth Bell 505. HELIFAB and Arrow Aviation work in partnership to bring new Supplemental Type Certificate (STC)-approved products to market. HELIFAB holds STC and Parts Manufacturer Approval (PMA) for various installations.

The HELIFAB Emergency Medical Kit expands the Bell 505's versatility by offering customers an optimal EMS platform capable of efficiently transferring patients with the necessary healthcare equipment onboard. The Bell 505 provides enhanced visibility with floor-to-ceiling windows and a glass cockpit, in addition to a flat-floor cabin and advanced avionics. With speed of 125 knots (232 km/h) and useful load of 1,500 pounds (680 kg).

Bell also announced a purchase agreement for six Bell 407GX aircraft to GMR with delivery expected to be complete by 2023 and an option by **Global Medical Response** to purchase up to nine additional aircraft by the end of 2024 to expand HEMS operations in North America. GMR is an industry-leading air, ground, specialty and residential fire services and managed medical transportation organization with more than 38,000 employees. GMR delivers care through multiple operating brands, including Air Evac Lifeteam, Guardian Flight, Med-Trans Corp., and REACH Air Medical Services. These operations transported more than 125,000 patients in 2020. This latest order will add to GMR's current Bell fleet of 214 helicopters.



Bell 505 with Helifab and Arrow STC fit.

Life Flight Network, the largest not-for-profit air ambulance provider in the USA, will add 12 Bell 407GX aircraft to its air medical fleet. Delivery of the aircraft will begin in May 2022 and will bring the total number of Bell 407GX series helicopters operated by Life Flight Network to 17. Life Flight Network also operates a host of other helicopters and airplanes throughout its service area. All 12 aircraft will come certified for Instrument Flight Rules (IFR), which allow for a greater margin of safety and additional operational capabilities. Each Bell 407GX will be equipped with a Spectrum Aeromed medical interior which provides for equipment necessary for ICU-level care provided in transport. These aircraft are staffed with a Certified Flight Registered Nurse and a Certified Flight Paramedic who possess the experience and training that enables them to provide an advanced scope of practice to their patients. Critical care services can include mechanical ventilation, cardiac monitoring, maintenance of hemodynamic intravenous infusions and the administration of blood products. For more than 43 years, Life Flight Network has provided ICU-level care to patients in need of emergency medical transport. Throughout Oregon, Idaho, Washington, and Montana, the company has 25 rotor-wing bases, nine fixed-wing bases, and two neonatal and pediatric bases and operates 30 ground ambulances.

The FAA plans to issue a Special Airworthiness Information Bulletin and an Airworthiness Directive in coming days concerning the rollout of **5G cellular phone** service in 46 major metropolitan areas of the U.S. on Dec. 5. The actions are expected to limit the use of automated systems on aircraft that rely on radar altimeters (also called radio altimeters) and it's possible that flight delays and cancellations will result. Reuters also quoted a letter from FAA Deputy Administrator Bradley Mims that says the agency shares "the deep concern about the potential impact to aviation safety resulting from interference to radar altimeter performance from 5G network operations in the C band."

In an auction of radio spectrum last year, the major telecoms paid a total of \$78 billion in an FCC auction to get access to a thin slice of the finite range of available radio frequencies to carry 5G signals. Those signals will be in the 3.7 to 3.98 GHz part of the so-called C-Band, which is apparently the sweet spot for carrying the data-heavy 5G signals. Radar altimeters operate in the 4.2-4.4 GHz frequency range (their sweet spot) and the fear is that the nearby powerful cell signals will cause interference for the avionics. The FCC approved the use of the spectrum for 5G saying "well-designed [radio altimeter] equipment should not ordinarily receive any significant interference (let alone harmful interference).

The precise nature of the impending rulemaking hasn't been revealed yet. They're the source of altitude data for ground proximity warning systems.

The U.S. approach to the 5G rollout differs from that of Canada, which is also concerned about radar altimeter interference. Canadian radio spectrum authorities have placed restrictions on the use of 5G trans-

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mitters near major airports to ensure there is no interference with radio altimeters. Major telecoms in Canada are protesting the move, saying it will keep them from offering the latest wireless services to many businesses and private customers in the heavily industrialized and populated areas around major airports. [AvWeb]

Ed: AT&T and Verizon have temporarily paused rolling out 5G services. The carriers will work with the US FAA to address concerns about potential interference between key cockpit safety devices and towers on the ground transmitting 5G signals. AT&T said in a statement that it planned to delay its 5G deployment until January 5, Verizon agreed to the temporary pause in deployment of 5G over the C-band spectrum in order to work with the agency. But the company is still on track to deploy service in the first quarter of 2022.

Three months ago, **SPX Corporation** announced that it has completed the acquisition of Enterprise Control Systems Ltd (ECS). Headquartered near Silverstone, Northampton, UK, ECS is a leader in the design and manufacture of highly-engineered tactical datalinks and radio frequency (RF) countermeasures, including counter-drone (C-UAS) and counter-IED RF jammers.

Together, ECS and TCI will provide customer-tailored solutions for C-UAS, COMINT and RF countermeasures within the Electromagnetic Spectrum. Hardware and software integration across offerings from both companies will optimise signals intelligence, paint a clearer operational picture and facilitate threat interdiction. One example is counter-drone operations, pairing TCI's Blackbird for detection and location of drones and controllers with ECS's Claw for jamming them. These synergistic solutions will provide domestic and allied government agencies enhanced capabilities to deal with the threats posed by asymmetric warfare, non-state actors and near-peer adversaries. www.spx.com

FAI Air Ambulance (FAI rent-a-jet GmbH) has obtained supplementary type certification (STC) for the **EpiShuttle** on the CL-600 aircraft after undergoing comprehensive tests on flammability, rapid decompression, and patient evacuation. The test was passed without any complaints or remarks.

Since FAI has installed the EpiShuttle in the Bombardier Challenger 604 on a Spectrum Aeromed MedBase with a fixed adaption to a Spectrum Aeromed Cargo Stretcher, they no longer considered the EpiShuttle to be "loose equipment" compared to other mobile medical equipment.

Due to this FAI wanted to obtain an STC for the CL-600-2B16 aircraft that included the EpiShuttle.

The EpiShuttle went through comprehensive and challenging tests during the certification process. All the test procedures were carried out without any complaint and the STC was issued and granted by the EASA.

The EpiShuttle had to undergo three different tests during the process, flammability test, rapid decompression test and patient evacuation.

The flammability test examined how easily the built-in material ignited, how quickly they burn and how they react when burned. The tests showed that there was neither combustion or smelting or drop formation in the test bodies.

Second, they tested the behaviour of the EpiShuttle in the event of a sudden drop in pressure, a so-called rapid decompression test. In the event of a sudden drop in pressure in the aircraft, it must be ensured that all components can withstand the forces acting in order to avoid contamination of the environment. The behaviour of the EpiShuttle where tested and simulated in a pressure chamber in an approved test laboratory. The test showed no damage or functional restrictions on the components of the EpiShuttle nor the attachments.

The last test the device had to undergo was a patient evacuation. According to specifications, it had to be possible to evacuate a patient within 90 seconds in an emergency. During the test the patient was evacuated by FAI employees within 56 second. FAI Air Ambulance invested a total of € 57,000 in the individual test procedures.



MD Helicopters, Inc. (MDHI) has delivered a new MD 530F to the California Department of Fish and Wildlife. The agency's first aircraft, the helicopter's primary mission is to seek out and eliminate cannabis cultivation on public land and assist in the cleaning up the destruction caused by the illegal activity. The aircraft will also support the department's additional fish and wildlife missions including search and rescue, surveys, and general law enforcement. Illegal marijuana grow operations far outnumber licensed operations, and with them comes water theft and the poisoning of fragile forest ecosystems with pesticides and other illegal chemicals. The MD 530F provides the department with a new tool in the fight against these illegal operations that threaten already drought ridden lands and stressed vegetation.



HELICOPTER LINKS
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MD Helicop-

The helicopter features the Garmin G500 [H] TXi Electronic Flight Instruments (EFIS), Howell Instruments Electronic Engine Instruments and Crew Alert Systems (EICAS), and Garmin GTN 750Xi Touchscreen NAV/COM/GPS. The 530F's powerful Rolls-Royce 250-C30 650 shp turbine engine allows for additional mission equipment to increase the aircraft's capability. The configuration also includes an extended range fuel tank, left and right side fast rope rappelling systems, integrated cargo hook for sling loads and human loads, special operations benches, and Raptor Long Gun System rifle racks and wire strike protection system. The NVG compatible cockpit comes with Garmin's GTR 225B NVG, and Canyon Aeroconnect Flexcomm™ RT-7000 Airborne Tactical Radio to ensure seamless broadband civil and government communications. Other equipment includes an AEM LSC22 Siren/PA controller with 300W speaker system, Flightcell DZMX DZUS with satellite and 3G cellular capability, Canyon Aeroconnect Digital Audio Control System, Door post mounted MDHI remote engine torque gauge and Door post mounted Onboard load weight indicator

Australian company **Helitak** has received approval from the Federal Aviation Administration (FAA) to include seven additional Sikorsky Black Hawk Type Certificates on the Helitak FT4500 Black Hawk STC that was awarded in May 2021 bringing the total to 10 UH-60 or EH-60 models now approved for operation. With the receipt of the AML Amendment, operators of Black Hawk helicopters issued under these eight Type Certificates are approved to install and operate the Helitak FT4500 Fire Suppression Tank. Further Type Certificates will be added in the coming months.

The deeply modernized Ka-226T light helicopter, which is being developed by the **Russian Helicopters** holding of the State Corporation Rostec, has started flight tests and made its maiden flight at the Mil and Kamov flight test complex of the National Helicopter Engineering Centre. For the first time, the upgraded helicopter was presented at the international aerospace show MAKS-2021, and the international premiere of the updated Ka-226T took place at the Dubai Airshow last month.

The new model differs from previous models of the Ka-226 family in having a new airframe and fuselage design with significantly increased aerodynamic characteristics. The body is made using modern lightweight materials, a new main rotor mast, blades and main gearbox, a shock-resistant accident-resistant fuel system as well as new flight-navigation and radio communication equipment, optional



oxygen equipment, ballonets, air conditioning and heating system.

Serial production of the upgraded Ka-226T helicopter is planned to begin in 2022 at the Ulan-Ude Aviation Plant in close cooperation with the Kumertau Aviation Production Enterprise.

VRM Switzerland, the leading manufacturer of VR helicopter simulators, presented its latest development, the Airbus H125 training device, at European Rotors in Cologne. Pilots with type rating can train on it immediately without any adaptation time and without changing their working strategy. Flying the simulator is representative for flying the real helicopter.

Search and surveillance specialist **Sentient Vision Systems** has joined forces with Austrian-based Airborne Technologies and aircraft integration specialist company Phoenix Aerospace to create a Middle East centre of excellence for sensor integration focussed on introducing the AW139 ViDAR SCAR (Self Contained Aerial Reconnaissance) Pod to the UAE market.

Launched at the Dubai Airshow, the tripartite initiative introduces the latest evolution of the ViDAR (Visual Detection and Ranging) pod family, designed for a range of Search and Rescue (SAR) and Intelligence, Surveillance, Reconnaissance (ISR) applications for civilian and military use, and recently demonstrated and operated with Diamond Aircraft in Belgium.

Sentient and Airborne Technologies' AW-139 Day/Night ViDAR SCAR Pod, provides round the clock search capabilities, with real time autonomous detection of SAR targets. When searching small objects such as a life raft or a person in the water, ViDAR has up to 300 times greater search coverage than an aircraft without ViDAR meaning more lives saved and lower mission costs.



Pratt & Whitney Canada (P&WC), announced that it will participate in a long-term sustainable aviation fuel (SAF) strategy by German air rescue operator ADAC Luftrettung. To support their goal of achieving carbon neutrality for their operations, ADAC Luftrettung will extend SAF usage to its fleet of P&WC-powered helicopters.

While all Pratt & Whitney engines are certified to operate on blends of up to 50% SAF with conventional Jet A/A-1 kerosene, this pilot program will allow ADAC Luftrettung to validate its own best practices for SAF usage in its day-to-day operations. With a commitment to operate SAF at blends of 30-40% over the course of 36 months, the program will set one of the most extensive operational SAF usage cases for the sector.

ADAC Luftrettung is one of Europe's largest air rescue organizations, with a fleet of more than 50 helicopters, including P&WC-powered H135 helicopters.

DART Aerospace has received FAA Supplemental Type Certification (STC) for its SkyCannon® Fire Attack System on the Sikorsky UH-60/S-70 helicopter. The UH-60/S-70 is the third helicopter type certified to operate the SkyCannon® after the Airbus EC225 Puma and Avicopter AC313.

DART worked closely with Nevada-based Skydance Helicopters to flight test and certify the SkyCannon® for the UH-60/S-70.

Skydance claim that they worked with DART on expanding the SkyCannon® system beyond the requirements of the first Asian customer and believe that the system has the potential to make a considerable impact in the firefighting market and for other firefighting operators in the helicopter industry. It was designed to control and contain high-rise fires by providing the ability for helicopters to reach beyond ground-based firefighting efforts with a directed low-pressure, high-volume water stream. The SkyCannon® works with DART Fire Attack Tanks to pump water through an extended boom off the nose of the aircraft to deliver precision applications on high-rise structures. The boom extends one meter beyond the rotor diameter to avoid rotor wash and the system includes an infrared camera and distance measuring equipment for accuracy. Equipped with a hover refill snorkel, the system can rapidly refill from any body of water and can be installed and removed in 30 minutes.

The first UH-60/S-70 SkyCannon® is planned to enter service in early 2022.



ACCIDENTS AND INCIDENTS

13 August 2021 Airbus BK 117C-2 N262MH Air ambulance of Cleveland Metro Life Flight Cleveland, Ohio operated by Metro-Aviation Inc. Air ambulance had just departed Lorain County Airport on a return trip to base after scheduled maintenance, when a large bird flew into the front right portion of the aircraft, below the flying pilots feet. There was damage noted to the chin bubble "plexi-glass" near the feet of the pilot. The crew returned to the maintenance hangar, approximately 5-7 minutes away. [Concern]

1 October 2021 Beechcraft King Air C90 N35HD. Air ambulance of Guardian Flight LLC, South Jordan Utah, USA. After take-off the clinical crew alerted the Pilot-In-Command (PIC) of smoke in the cabin, the cabin's right-side air vent and wall near the right rear facing seat were unusually hot. The PIC declared an inflight emergency and began an immediate return to the departure airport. The crew donned their oxygen masks. The aircraft landed without further incident. Upon removal and inspection of the electric heater, signs of a melted Foreign Object Debris (FOD) was discovered on the heater coils and remnants of that FOD was in and aft of the heater. The origin and type of FOD is unknown [Concern]

13 October 2021 Airbus Helicopter H125/AS350B3 N881SD. City of San Diego Police operating a patrol flight from San Diego-Montgomery-Gibbs Executive Airport, California. While night flying at 85knots and 1,500 altitude (approximately 1,000 feet agl) struck sea birds causing significant damage to the nose and left side window. Returned to Montgomery-Gibbs Airport. [Trevor Riley] rotor Monkey



29 October 2021 Kamov Ka-32A11BC B-7811 Fire fighting helicopter crashed into wooded terrain near Chenzhou City, Hunan Province. There was a post crash fire which destroyed all. Three occupants died. [ASN]

16 November 2021 Air Tractor AT-802AF N802NZ Fire fighting aircraft operating out of Fort Collins/Loveland-Northern Colorado Regional Airport, Colorado for CO Fire Aviation Inc., crashed during a night fire fighting flight assisting at the Kruger Rock fire. After several circuits of the area it came down south of Estes Park in Larimer County Colorado killing the pilot and sole occupant Marc Thor Olson, who was an 8,000 hour Army and Air Force Veteran. This was the first time that night fire fighting using NVGs had been attempted in the region. [ASN]

20 November 2021 Bell UH-1H-II PNC-0715. Policia Nacional de Colombia. While on aerial patrol Barrancabermeja/ARAVI was written off in a crash at Subachoque, Cundinamarca Colombia. Of the six persons on board two died at the scene and one died subsequently in hospital. No post crash fire [El Tiempo/ASN]

22 November 2021 Leonardo AW169 N307TC Air ambulance of STARFlight (Travis County Emergency Services). When taking off from a hospital helipad at Bastrop, Texas struck a bird causing damage to the windscreen. [ASN]

SAFETY

In May 2020 an Irish Air Corps AW139 helicopter undertaking a civil medical flight took off with one of its doors unlocked after members of the public began to take photos as a critically ill patient was being rushed to hospital with life-threatening injuries.

The crew had to ask onlookers to stop taking photographs, with an advanced paramedic trying to position himself so that the patient's head would not be visible. As the helicopter took off again from the Phoenix Park in Dublin and while flying back to base at Baldonnell, the unlocked door fell off mid-air — luckily only hitting the roof of an unoccupied building.

An investigation report stated that a decision had been made to keep the helicopter's "rotors running" in part due to the number of people at the scene. It said there were a number of distractions including people taking photos, difficulties with access for the ambulance on the ground, and a new requirement making wearing of face masks compulsory for the crew. The report also said the installation of a "Covid-19 screen" in the aircraft had affected the air crew's ability to communicate easily with each other.

The helicopter had flown from Custume Barracks in Athlone to a house in Co Kildare to pick up the patient. It took off for Tallaght Hospital in Dublin, but mid-flight the patient's condition was deteriorating and they were diverted to the Mater Hospital.

Because the Mater did not have a landing site, the pilot was told to land at the Army Grounds in the Phoenix Park to meet an ambulance crew there. The large number of onlookers impeded the crew. The [onboard paramedic], who had opened the port door to step out of the aircraft in order to gain better access to the patient's airway, was conscious of this fact and positioned himself at the patient's head and pulled across the port door in an attempt to obstruct the view of the patient. A crewman tried to stop the crowd taking photographs of the helicopter and the critically ill patient.

Before take-off, no physical check was made on the starboard door to see if it was closed or locked. Once flying the starboard door departed the aircraft.

The handle was found to be in the UP (unlocked) position and the door locking rods had not been deployed; it was damaged beyond repair.

The report said distractions had played their part in the incident, including a concern that members of the public might have approached the aircraft had it switched its engines off.



UNMANNED

Network Rail's air operations team have successfully flown a drone Beyond Visual Line of Sight (BVLOS) for 25 kilometres over dry land – believed to be the furthest such civilian drone flight in Britain.

The proof-of-concept flight – which took place on October 27 from Bicester along the East West Railway – is the culmination of 18 months of work. It is a significant step forward in terms of how drones can be used to inspect the railway safely, quickly and cost-effectively but it was using basic equipment.

Drones and helicopters have long been used by Network Rail to identify faults on the railway, helping to predict and prevent failures to reduce disruption for passengers, while also representing a safer form of maintenance by limiting the number of manual inspections that need to be carried out by foot. They are also occasionally used by BTP on law enforcement missions.

Until now, drones were only ever flown above the railway when they were in clear sight of the operator, and usually only for four or five kilometres at a time. While this can still be a helpful tool to inspect Britain's rail infrastructure, it requires the team involved to set up multiple times at different locations. The ability to fly Beyond Visual Line of Sight enables the air operations team to inspect the railway over a much larger area while saving valuable time and costs.

Although the operator was flying the craft BVLOS the drone a Network Rail helicopter flew alongside the drone to monitor the flight throughout. Data captured by the helicopter will be used to create a 'digital twin' of the railway that was flown over.



Further to the earlier comments on the ability or predisposition of the US FAA to take chances when deciding whether widespread drone use, and in particular BVLOS operations it is worth reminding ourselves of the situation relating to Boeing Aircraft in the wake of the 737MAX debacle and subsequent issues discovered relating to the 787 and other production aircraft.

On November 3 Federal Aviation Administrator (FAA) Steve Dickson testified for three hours before a Senate Committee as crash victims' family members sat in the audience listening. Dickson's testimony comes one week after he testified before the U.S. House Transportation and Infrastructure Committee on the certification process of new aircraft. His testimony comes three years following the crash of Lion Air 610 that killed all 189 on board and the second crash just five months later of another Boeing 737 MAX8 that crashed after take-off in Ethiopia killing all 157 on board.

In short the FAA are squirming and under a very bright probing light. They are not about to take chances with drone certification into anything but certainty.

Mark Forkner, former chief pilot of the new Boeing aircraft, is set to stand trial in Forth Worth, Texas federal district court on a six-count indictment for his actions involving the 737 MAX, including lying during the certification process of the new aircraft. His not guilty plea will further drag out any recovery from the defensive position the FAA feels it is in.

Skyborne Technologies, a Defence Tech company specialising in smart aerial robotic platforms, has performed a "first of type" aerial firing demonstration of the company's weaponised 5-shot 40mm UAV, the Cerberus GLH. The demonstration was performed in Australia under Civil Aviation Safety Authority (CASA) approvals.

The approval/testing site is on a Queensland rural property, on which Skyborne has partially leased, to support ongoing testing and development.

Current Australian Civil Aviation Safety Regulation prohibits operation of a weaponised Remotely Piloted Aircraft on private land within civilian airspace. Skyborne first demonstrated the Cerberus GL UAV (single shot 40mm grenade) prototype in Georgia, USA near Fort Benning for a US Army Demonstration Program called Army Expeditionary Warrior Experiment in December 2019. The demonstration was the first to fly and fire the unique tri-tilt rotor man-packable weaponised UAV with an aerial firing activity for a US Army audience.



British defence company **Ultra Electronics** unveiled a working prototype of a mind-controlled drone at the Three Counties Defence and Security Expo (3CDSE) in Malvern, England, on 4 November.

All the pilot has to do is to focus their attention and eyes on specific circles on a computer screen.

This new technology was developed by Ultra Electronics, a British company working in the defence and security industry. The drone and the brain sensor were already available on the market, so Ultra Electronics designed a software to make the two devices work together. Although the laptop does have a webcam, it is not used to look at the user — the focus of the mind on the circles instructs the drone what to do via the brain sensor worn on the user's head.

There are four circles on the computer screen in total: two big ones for take-off and landing, and two small ones for spinning left and right. The advantage of this technology is to reduce the number of hand-held controllers for soldiers.

The prototype was designed in partnership with Neuro8, a neuroscience consultancy company founded by Ellen Kay. She led trainings for Ultra Electronics employees and helped the drone project by helping the pilots focus.

The drone was demoed at the Three Counties Defence and Security Expo (3CDSE) in Malvern, England, on November 4. YouTube <https://youtu.be/g4DrrTa1w-A>

PEOPLE

NPAS, an organisation that seems to excel in having short lived temporary leadership, has a new temporary leader, recently promoted Chief Superintendent 3670 Vicki White

MOVE ALONG THERE

Peruvian police have been hailed for their noble act of rescuing a pigeon stuck in a high voltage electric wire in the capital Lima. According to local media reports, the pigeon after almost 12 hours of being stuck on the power cable, was rescued with the help of a drone.

In a viral video, police officers are seen using tape to attach a knife to the drone and then flying it near the pigeon to cut the string binding the bird to the power cable. The incident took place in Lima, Peru.

"Peruvian police used a drone, some tape and a knife's blade to rescue a pigeon trapped in a high-tension electric wire in Peru's capital Lima," read the caption of the tweet, which now has over 100,000 views.

According to a media reports, the pigeon was later caught by the locals, who used a scissor to cut away the remaining string tangled on the bird's leg.

The rescued bird was then put in a cage and taken to a local shelter for abandoned animals, the report added. Source: YouTube

#

Drones must be a thing of the future, they have just opened the Aviation Unmanned Vehicle Museum (AUVM) — the world's first dedicated museum — in Caddo Mills Texas.

Containing more than 40 restored historic drones, the museum's exhibits were built from a personal collection of drones that belonged to the late Harold "Red" Smith, of Parker, Texas, a retired lieutenant colonel with the U.S. Air Force who was tragically killed by a drunk driver in 2017 before his dream of opening a museum could be realised.

After Red's passing, his children and grandchildren took on the daunting task of not only restoring the drones, but also doing research on them and the organizing the thousands upon thousands of parts (some dating back to the late '30s) that Red had amassed over the years. [Stars and Stripes]

Dr. Evie Papada a research fellow at the School of Geography and Sustainable Development at the University of St Andrews has teamed up with Dr Antonis Vradis, to use a three-year research grant from the Economic and Social Research Council to undertake a study on the 'Digitalisation of Policing and Urban Public Space'.

The project looks at the ways in which the recent histories of law enforcement and technological advancements coalesced in the making of contemporary digital policing in the UK. The contemporary deployment and use of Facial Recognition Technologies is one aspect of this research, but they aim to look more broadly at how the digitalisation of policing in the UK has been shaped in the past couple of decades. As primary sources, we are hoping to examine, amongst other, government policy texts, police departmental records and reports or any relevant commissioned research. They are also seeking to interview relevant individuals.

They are currently looking for contacts and/or guidance/advise in relation to the topic. They are interested, for example, in how the notions of crime prevention and specific technologies have been intertwined, on discussions/opinions about the impact of technology on police operations, its benefits and drawbacks and so on. They fully realise that their task will not be easy, getting reactions will be starting difficulty, retaining the attention of those interviewed will be another.

For a start I have sent them Matt Parr's HMICFRS report on the difficulty NPAS has with technology "Planes, drones and helicopters" and pointed them in the direction of the many difficulties represented by the replacement of Airwave by ESN. There is food enough to fill their initial thoughts.

Evie and Antonis are no doubt awaiting a range of opinions from PAN readers. You can mail them at ep227@st-andrews.ac.uk

In the United Kingdom it is reported that following the insistence of the National Police Chiefs Council that all new police officers gain a university degree it has become more difficult to attract and retain candidates. I bet someone warned them it would happen.

DAMNED IF YOU DO AND DAMNED IF YOU DON'T

Back in the spring of 2020 the HAI Heli-Expo event in Anaheim opened to the shock news that retired football legend called Kobe Bryant had died in a helicopter crash not far away from the Convention Center. The NBA legend died alongside his 13-year-old daughter and seven others. The shock was somewhat muted in that a significant number of the attendees (the foreign ones) did not have a faintest idea who Bryant was and also knew little about the very domestic American Football scene. But still a helicopter had crashed in weather it arguably should not have been airborne in and everyone present had an opinion on that concept. For America the story has not gone away and the widow has been in the courts placing blame on everyone from the pilot and operator to law enforcement.

It turns out that sheriff deputies took unofficial images of the crash scene. A not unusual turn of events. We do not know the exact content of those images but when the complaint by an outraged widow emerged it was agreed that their actions were wrong. So what do you do when a wrong has been done? Well the sheriff's office confiscated the images and destroyed them. Unfortunately the widow did not agree with that action and now she has sent an attorneys to ask a judge to punish Los Angeles County for the alleged destruction of almost all evidence that sheriff's deputies snapped and shared photos taken at the site of the helicopter crash.

By all accounts Sheriff Villanueva was keeping his promise to the Bryant family by making sure no photos got out and, despite being advised not to by a junior officer, duly ordered the errant deputies to delete the photos from their phones. No one had sent a photo to anyone outside LASD and none of the crash site photos have ever been publicly disseminated.



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FUTURE EVENTS

Singapore Airshow, Asia's most influential aerospace and defence event concluded a strategic media and knowledge partnership with Aviation Week Network, the largest multimedia information and services provider for the global aviation, aerospace, and defence industries. This first of such strategic media and knowledge partnerships among international air shows is designed for both organisations to deliver robust content that provides insights and thought leadership that transforms the aerospace and defence industries.

Through Aviation Week Network's extensive connection to the global aviation, aerospace and defence community, the partnership aims to bring strategic insights to every Singapore Airshow, and the two years between each edition.

The partnership kicks off with a strategic webinar on 'The Future of Aerospace in the Asia-Pacific' on 29 November 2022, 4.30pm SGT. In the lead-up to Singapore Airshow 2022, and after, both organisations are committed to delivering quality content and insights on a regular frequency to its audiences.

Singapore Airshow is set to return for its 8th edition from 15 to 18 February 2022 at Changi Exhibition Centre, Singapore.

A little later in the year is the July 15-16, 2022 DefenPol China 2022 the 6th Guangzhou International Defence and Police Exhibition & Summit to be held at the Nan Fung International Convention and Exhibition Centre (NICEC) Organised by the Guangzhou and Shanghai Bayern Messe Co. Ltd. The event will not quite be clashing head to head with the Reno based APSA Annual Exposition on July 25-30, 2022 but I suspect that the 51st ALEA Annual Conference & Exposition will have a greater world attraction for its focus on law enforcement.



EVENT REPORT

Between 16 and 18 November 2021 European Rotors held a first event at the extensive Koelnmesse Convention Centre in Cologne, Germany. A victim of Covid 19 last year, the event set about starting again a year later. As the organisers claim and a certain other recent British show feared, the European vertical flight show and conference stepped up to the table and delivered the goods. As a result it is currently the only European event where most of the European rotorcraft industry meets and seeks to grow its business.

It was beset by significant COVID restrictions to travel and interaction and of course required the discomfort of wearing of masks, the devices often muffling important conversations until you sat down and removed them! Above it all there was the ever present threat of more restrictions to come but the event prevailed. Many original travel plans were altered to fit in with shifting restrictions but in the end most of the world had access to Cologne if they so desired and numbers, though depressed, held in the face of joint problems presented by health and the fact that the Dubai Airshow was held at the same time. Health was under threat within days as COVID reasserted its grip on the European population. Fortunately national politics was in a state of flux at the time so the event was perhaps sheltered by the changeover in Chancellors as Angela Merkel stood down in favour of Olaf Scholz.

The organisers were beset by the same lack of accurate travel information their visitors faced, for instance those heading from the UK perceived that the borders of a locked down Belgium were closed to them, but those that went ahead found it was a viable route after all. Fortunately the COVID decimated airline industry was up to the task, but many were deterred.

The event was a cooperation between the European Helicopter Association (EHA) and the European Union Aviation Safety Agency (EASA) but early news at the event announced that the team are now also joined by Helicopter Association International (HAI), effectively making the event something of a closed shop in terms of European rotary aviation events. The agreement solidifies a long-



term relationship between the two associations for the international vertical take-off and landing (VTOL) industry, recognising their aligned values and missions and formalising their ability to collaborate on initiatives. The agreement will take effect January 1, 2022. EHA and HAI teams have already combined efforts on several projects. On the international level, the two are both active in the Vertical Aviation Safety Team and within HAI's International Partnership Program; at the regional level, HAI supported EHA in marketing and operational support as it organised this first edition of European Rotors.

Successful shows are more about atmosphere than content. In terms of overall footprint European Rotors was not much bigger than Helitech but they had a few more helicopters and few large drones rather than numerous small ones but it was the feedback from the majority of the exhibitors that sealed the success of the event. It was difficult to identify an exhibitor that was not relevant and harder still to find one with a negative view on the proceedings. No empty shell schemes visible and little evidence that anyone was going home early on the last day, that says a great deal - there was business to be done.

The drone content was entirely different from that on display at Helitech in London. It was far smaller in quantity but vary much larger in individual size. London showed the small stuff and Cologne topped the display with what might be loosely described as a cattle pen on fans. Autopiloted universal flying platforms with payloads between 200 and 1,000 kg for cargo delivery, crop-spraying, rescue and wildfire extinguishing may catch on. They are made by Vira and manufactured in Neuhausen/Spree, Germany.

<http://www.viradrones.com>



The Ark (above) looked a size and weight that would be impossible to fly on its own let alone as a means of transporting living beings and equipment.



A substantial conference programme was spread over the three days and included airborne emergency services items spread thinly across the three days. The police focussed events appeared on the afternoon of the last day, and that small gathering included an appreciative audience from several countries – including locked down Belgium and The Netherlands. Those items included presentations from Cologne based police aviation support pilot Tim Pittelkow on helicopter missions in North Rhine – Westphalia, Martin Landgraf, the deputy chief of the Baden-Württemberg police helicopter unit on the use of drones in police missions, and Jeroen Eeckalaers from Belgium on the challenges facing a non-military state aircraft operator (see the item in this edition on Belgium). There was only one commercial presentation scheduled for that afternoon and that from a familiar face at PAVCon Europe, Hector Estevez of Centum who present on that company’s Lifeseeker mobile phone related application for assisting in SAR missions. Leonardo stepped in to fill a gap caused by a police item that was cancelled.

Last month I commented on the fact that the event was pay to enter, I thought it might be detrimental to the numbers attending. On the two days I was present it would appear that the charges failed to significantly reduce footfall in the widely spaced aisles. The cost and of course Covid will have deterred all but the most ardent of attendees.

Although the show attracted most of the main manufacturers there was evidence that they were unsure of how much effort they needed to put in to the first edition of a European Rotors event effectively going head to head with a Dubai show that was also calling heavily upon their marketing capabilities. This was not yet a Heli-Expo in Europe but I would expect that now they have tasted the capability of the venue manufacturers will seek to increase overall content in the future. In terms of airframes Airbus brought along two, Leonardo settled with one and Bell brought two- other exhibitors brought a range of small rotorcraft. All in all a significant effort for a first show but future iterations should see such as Kopter appearing especially as they approach certification of their now Leonardo product.



Bell 505



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The Networking continues

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PAvCon Europe 2022 in Austria is receiving increasing interest and personal contacts at the recent Helitech event in London and the European Rotors in Cologne have further underlined the level of support for a police event next June. The appetite for an event, any event, across Europe is boosting the interest, hopefully the Covid restrictions are stepped down next summer.

I seem to recall similar positive thoughts last winter that proved less than that accurate, but we can always be positive and move forward.

In the wake of the highly successful European Rotors get-together there were more than a hundred companies interested in attending and exhibiting in Austria. That enthusiasm will wane though and I expect that the numbers will fall back to the 40-50 maximum exhibitor level PAvCon is used to. Putting a limit on the numbers may be an attraction in itself. It may even expand interest in a significant static line up. As a private airfield we should not face the frenetic repair job undertaken in 2019 when in Amsterdam. That started in a large hangar on an international airport and ended up in a very welcoming and efficient hotel. The Austria event is the first since then so it will hopefully not run into that level of difficulty.

Although a visit to Austria to finalise the details has been delayed by a current state of Covid lock down in the country it is hoped that a guide to the event and booking forms will be on-line by next month. It is unlikely that the content of the guide will offer finite hotel prices and similar details. www.pavconeurope.eu

