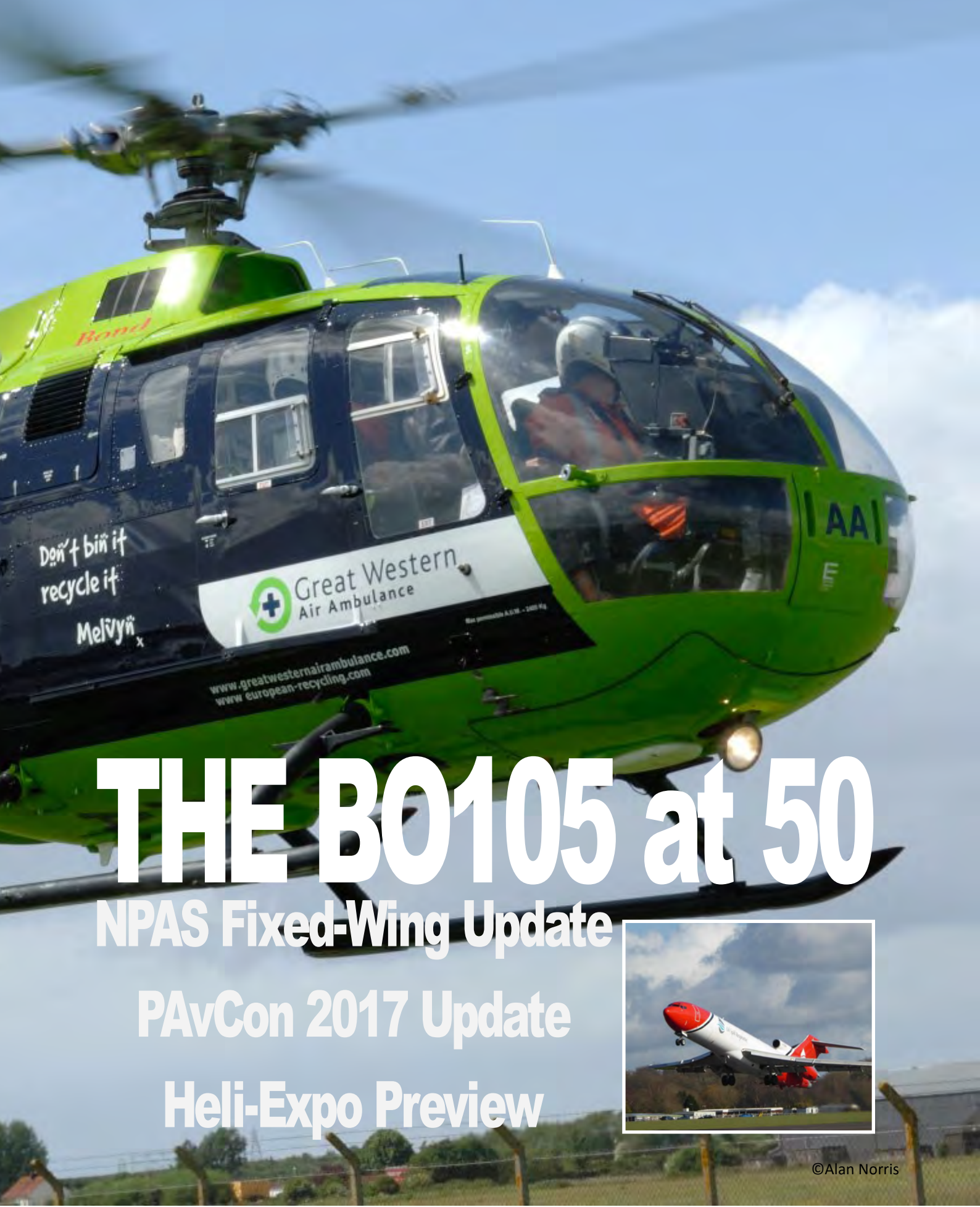


# Police Aviation News

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Issue 251

March 2017



## THE BO105 at 50

NPAS Fixed-Wing Update

PAvCon 2017 Update

Heli-Expo Preview



# EDITORIAL

What is in a name?

In recent weeks an associate commented that *Police Aviation News* had changed. At one time the news it contained held faithfully to law enforcement but now the majority of the news had evolved to reflect a growing air ambulance sector.

It may just be a temporary shift in the content. The distillation of numerous UK police operations into one is the probable reason. One NPAS but many charity air ambulances.

With the completion of 250 issues there is no surprise that the market has evolved around the magazine, indeed at times thought has been given to renaming it to reflect the content more closely. The on-going *Air -Britain* precis version is now called *'Emergency Services'* and at one time there was a brief rebranding to 'PAN' an emergency call-sign, but in the end the full name prevailed.

Love it or loathe it *Police Aviation News* is where you will find stories about the airborne emergency services in whatever form they appear. The title should cover all options from a UAV to a Jumbo Jet and regardless of whether the craft is enforcing, surveying, protecting or succouring. If the title were to be changed to reflect an apparent movement in the market who can be sure that it would hold true in a year or so?

So, the title can stay and perhaps, sooner or later, the content will catch up!

Bryn Elliott

# LAW ENFORCEMENT

## CANADA

**ONTARIO:** Sergeant Dan Mulligan the Ontario Provincial Police (OPP) sergeant pilot charged with two counts of misconduct for writing a letter to the editor of a local newspaper [The Sudbury Star] has been found guilty after a discipline hearing.

The Sergeant was charged with breach of confidence and discreditable conduct for writing a letter criticizing the OPP for relocating its search-and-rescue helicopter from Sudbury to Orillia.

The hearings were held last year but only announced late in January. He had pleaded not guilty but readily admitted to writing the letter in May 2015 after the OPP moved a helicopter.

The OPP viewed some of the content of the letter as "incendiary and alarmist." Mulligan had expressed a concern for "public and officer safety" and wrote "I couldn't possibly express in publishable words how strongly I object to such an ill-conceived relocation of such an important aircraft."

The OPP decision to relocate the Sudbury helicopter was, in part, to save money, an estimated \$254,000 if it operated out of Orillia.

Subsequently money has been found for a third OPP helicopter, to be positioned in the North which tends to suggest that the comment had some merit but it was more a case of whether he should rightly have made his complaint through the OPP chain of command.

Going some way to replace the missing OPP helicopter, the police are now leasing a dedicated helicopter for use out of Thunder Bay for search-and-rescue (SAR) and other missions.

This is the first time, the police in Thunder Bay area have obtained access to a dedicated helicopter leased from the Ministry of Natural Resources and Forestry under a six-month contract that commenced in November.

OPP have used MNRF aircraft in the past when they have been available, and Leon said the two have an excellent working relationship. A lease, however, ensures the aircraft is always on-call specifically for the police. Previous arrangements were more casual and undertaken on the understanding that MNR had priority for their own purposes.

The MNRF has operated a fleet of seven Airbus Helicopters EC130B4 helicopters for some time. The original fleet of four was increased in 2010. They are primarily for forest fire management work and utility missions across Canada's second largest province but there was always an assumed availability for police missions.

The Ministry of Natural Resources has been using aircraft for forestry and forest fire management since the founding of the Ontario Provincial Air Service in 1924. On June 26, 1946, it gained the international distinction of being the first agency in North America to use a helicopter in forest fire control. Helicopters were added to the fleet in 1984.

The OPP owned helicopters are based in Orillia where the OPP are headquartered, other aerial resources include small UAVs and two fixed-wing aircraft, one of which is primarily based in Thunder Bay.

The new arrangement, although temporary, will provide an opportunity to evaluate leasing as an option. The MNRF's own need for the aircraft will increase during the firefighting season, but the OPP will make an evaluation upon the completion of the lease period.

**FRONT COVER:** Last month marked 50 years since the Bolkow BO105 embarked on its maiden flight, on 16 February 1967, in Ottobrunn near Munich. See page 20 for the Airbus Helicopters celebration of the milestone this type represented. (image by Alan Norris)

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## HUNGARY

**POLICE:** The story appeared in PAN some months ago, but it was only last month that MD Helicopters Inc; officially announced the Hungarian National Police celebrating the addition of five (5) MD902 Explorer helicopters to their fleet at Liszt Ferenc Airport in Budapest. So the manufacturers story goes, the five former Baden-Wurttemberg Police MD 902s join a historically robust air support unit that also includes three (3) MD 500E helicopters dating from 1990. The MD902s have been acquired to replace an ageing 37-year-old PZL Mi-2 fleet.

With this acquisition, the Hungarian National Police become one of the largest fleet operators of MD-brand aircraft in Eastern Europe.

General Karoly Papp, head of the National Police, as well as several senior National Police officials along with representation from the Hungarian government were on hand to witness the January 26 arrival of the aircraft. The five were withdrawn from the German Baden-Wurttemberg fleet last summer.

The Hungarian National Police MD 902s are equipped for Night vision, 3-axis auto pilot, TCAS, digital video, high performance surveillance equipment, and cargo hooks permitting 3,000 lbs. of external load operations. Powered by two Pratt and Whitney Canada PW207E engines, the MD 902 features a fully articulated main rotor system, bearingless composite flex beams and rotor hub. Anti-torque control is provided by the patented NOTAR® system that reduces pilot workload and external noise levels, and significantly improves safety in confined areas.

*Ed: I can but hope that this is not to be the high spot for industry announcements for MD at the forthcoming HAI Heli-Expo. It appears I may have to get excited over this pre-owned transaction and the rumoured MD600 with a tail rotor. Surely not.*



Hungarian pair ©MDH

## INDIA

**BORDER SECURITY FORCE:** RT LTA Systems, an Israeli-based aerostat company recently completed two live demonstrations of the Skystar 180 aerostat system, a cost-effective solution surveillance system already deployed in many different countries worldwide, to the Border Security Force (BSF) of India. One demonstration took place at an operational area, and the other was conducted at the BSF headquarters at New Delhi. The company also displayed a Skystar 180 aerostat at the Aero India event.

The Skystar 180 is a small sized, mobile aerostat designed for tactical mid-range surveillance and public safety [military or police].

Based on a towable trailer, the system has a stabilised day/night electro-optical payload suspended from a helium filled aerostat, tethered to a ground system. It operates continuously at wind velocity of up to 40 knots, and can lift a payload of up to 20kg, providing surveillance coverage from an altitude of up to 1,000 ft. for up to 72 hours, after which it is brought down for a 20-minute heli-



Skystar 180 ©RTLTA

um refill. Only 2 people are required to fully maintain the system. The Skystar system was in use during the Winter Olympic Games in Canada, during the FIFA World Cup in Brazil, securing the Copacabana Fan Fest, and during the Paris climate summit (COP 21) in France, protecting the world leaders who attended the summit.

## NETHERLANDS

**KLPD:** Current wisdom from up on high appears to favour a strict protocol as far as air support is concerned. Aircraft are not to be used for non-criminal activities – mainly on the grounds of cost.

Early in September this wisdom was challenged in the pursuance of saving the life of an unfortunate sheep.

The amount of fleece carried by a domestic sheep is good for its owners but dangerous for the average sheep. If they fall over often some breeds are unable to get back up.

One such animal in the north of the Netherlands rolled onto its back in the middle of a paddock and stayed there.

Fortunately, a KLPD EC135 helicopter on a training mission complete with a crew of four – a TFO, a trainee TFO, a trainee pilot and PIC – noticed the unhappy sheep and a pixilated pair of trainees stepped in to help. <https://www.youtube.com/watch?v=Wf9v2w0WHkY> It was a slow story day on The Weather Channel.



Rescuers ©KLPD

## SPAIN

**GUARDIA CIVIL:** The Guardia Civil has recovered a helicopter that was found on a farm in Faraján in the Serrania de Ronda in Malaga province.

The helicopter is painted black and, apparently, does not have documentation or a registration number. When questioned by police the land owner said he did not know the reason why it was there.

The farm is located about three kilometres from Farajan and its owner usually lives on the Costa del Sol. Police believe that the aircraft could have been used for the transport of illegal goods and they have not ruled out that a mechanical fault might have forced the aircraft to land.

The Guardia Civil has now transferred the helicopter on the back of a lorry to a secure location and are waiting for someone to claim it.

In 2015 a helicopter, also painted black, crashed into an electricity pylon killing its two occupants. On board were three bales of hashish.

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## UNITED KINGDOM

Progress to February 6 2017 ©PAR

**NPAS:** The basic groundworks and framework of the new NPAS fixed wing base are now in place. Metal work for the structure of the metal frame and pvc hangar was being delivered in the first week of February with a view to get the roof erected before attempting to lay the concrete for the internal floor of the structure. Most of that was in place by the third week in the month. It is hoped that the completion of the roof will allow the floor to be laid regardless of future deterioration in the weather.

Thus far, the weather has been kind and good progress has been made towards a scheduled completion date of May 2017 which is well before aircraft arrival.

The design of the building is like the Rubb manufactured hangar at Hurn but overall it is to be significantly larger to house the expected fleet of six Vulcanair P68R. The offices and ancillary structures will be modular but incorporated into the fabric of the hangar. These will house the police crews and the contracted maintenance staff of Gama Aviation [see last month].

No details on the ongoing airport authority costs associated with having the facility at Doncaster Sheffield Airport [DSA] have been released but based on a previous 'Airside' project at DSA it will be a significant six-figure sum.

Four P68R have been ordered, two remaining on option, probably until at least 2018 when NPAS will be able to fully assess whether the capabilities of fixed wing meet the projections of operational needs. The aircraft are faster and able to loiter longer but they take longer to get in the air, which requires a base at a quieter well equipped airfield. In some ways, the enforced move from East Midlands Airport, the first choice, works in favour of expedited despatch. Once in the air tactics must be evolved on where the aircraft are going to loiter for up to 6 hours. The crew of two [the co-pilot seat being removed for operations] may never be faced with enduring a full 6 hours, a normal sortie will reflect experience.



Ten-days later on February 16 2017 ©PAR

KIER

It is many years since conventional overt fixed wing was undertaken in the United Kingdom. The last fixed wing operation was in Greater Manchester [GMP] but that was primarily covert. The former Chief Pilot is now leading the NPAS effort. Before GMP there were BN-2 based units in Hampshire, Cheshire and North East but these had long been dispensed with and converted to rotary wing operations. Although military and police expertise is in the background, effectively the new operation is starting over with a clean slate in producing an all-weather operation capable of operating in icing conditions. The guiding principle has always been that police air support has always required reasonable weather at the point of operations and, prior operations being effectively local in nature, lengthy transits were not required until NPAS came along.

On the principle of local air support delivered locally, the earlier fixed wing operations saw little need for full IFR, if the weather was closed in at the base it was assumed it would be at the nearby scene of operations. The new IFR operations by NPAS expect to be able to despatch an aircraft to locations experiencing good weather regardless of the conditions at base [Doncaster]. Future basing the fixed wing away from Doncaster may modify that principle slightly. Sending a P68R to the English Channel coast will take an hour – which is fine for say a missing person [Misper] search but not for a crime in commission - but basing one at Hurn will greatly shorten the transit time, as will having the aircraft orbiting awaiting calls. Tactics need to evolve.

The first aircraft [G-POLZ], now complete and testing at the completion centre of Airborne Technologies in Weiner Neustadt, Austria is now expected for late June 2017 delivery so will miss the PAVCon Conference.

With delivery in June it is not expected that the aircraft will become available for initial operations much before August. Deliveries of subsequent aircraft [G-POLV, W, X] will take place at monthly intervals. G-POLY was unavailable as it was issued to a Cameron hot-air balloon. All things being well the initial fleet will be able to offer a meaningful 24-hour fixed wing service from the New Year 2018.

Notwithstanding the Editorial, this month I can report a significant increase in police news thanks to the content of the latest set of minutes released by NPAS. The fact that the Strategic Board have already had another meeting prior to the publication of this set from December means it is somewhat old news but at least it shows a direction of travel.

Back in December they were reporting that five MD902s were out of service – since then of course the rest of the fleet has been retired and replaced by the EC135. All the moves over the past three years meant that NPAS would deliver the required 14% savings within a three-year period. There had been an increase in activity and reduced costs, the pre NPAS cost of police aviation was £56M and it is now said to be £39M.

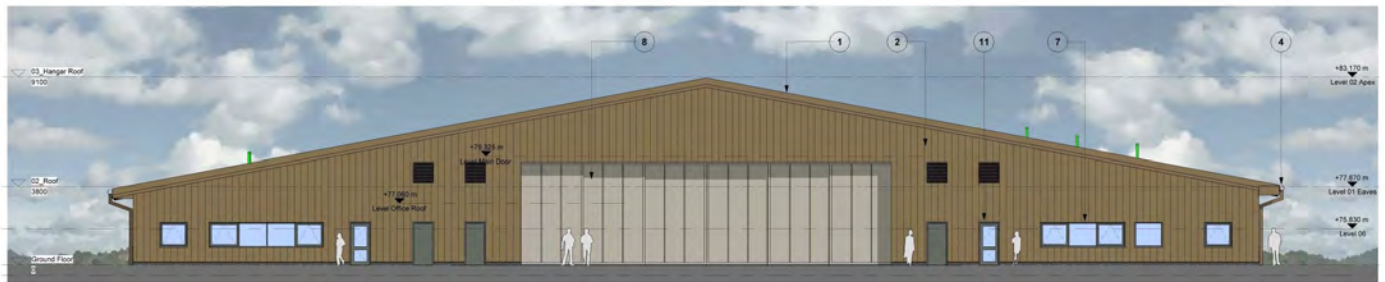


Refuelling at Lippitts Hill ©NPAS London

Last month the base at Exeter gave up its EC145 G-DCPB for an EC135. The 145 was despatched to Lippitts Hill to work over London and images were posted on Twitter by NPAS London [above] and on the



North Weald website. The reason behind this move has not been made public but I would hazard a guess that it is a temporary measure to ensure that the London base is kept up to strength. Far from meeting the original plan to disperse the London 145s across the country, experience may have proved it better to concentrate them in the single base. The Exeter based 145 is not a perfect fit as its systems were designed by a different team where the three London machines were near identical but the base airframe is the same.



Planning North Elevation

On the air base front, as we know, Almondsbury is to replace the Filton as a combination facility with the Great West Air Ambulance [image from the planning application above]. NPAS are still actively seeking a replacement for the London base at Lippitts Hill and Redhill [where NPAS was launched]. Redhill has received notification that there is a plan to sell the land for housing development so has a limited lifespan as a viable base. As previously noted within these pages NPAS are developing detailed options for a future fleet replacement plan and the idea of dual use air bases, where multiple aircraft would be based together. New statements of intent are that they are considering moving rotary operations from NPAS Carr Gate to NPAS Doncaster and combining the two rotary aircraft from NPAS Boreham and NPAS Redhill to an as yet unidentified single location.

The replacement of the expensive Lippitts Hill base looks likely to be a joining of rotary with fixed wing and it looks like that the winning location will be the long-favoured Northolt. A negative comment on that likelihood appeared in the local media at the end of January. Ealing council want to close RAF Northolt and build 20,000 homes. Hillingdon Council opposes the plan but it does cast doubt on the long-term viability of the location as a base. It is close to London Heathrow and likely future expansion there is northward – towards Northolt - a factor that could easily threaten the future of the smaller airfield.

Brexit tends to have cost many businesses dearly but it seems that NPAS finances avoided the problem. NPAS were underspending on revenue at just short of £200,000 and pay is overspending due to assumptions when vacancies would arise which had fluctuated throughout the year. There had been a significant underspend on aircraft maintenance costs due to NPAS receiving some benefit as a large amount of the costs were paid for in Euros and US dollars which had led to an underspend. Forecasting highlights that

£2M of the Home Office grant remained unspent.

In apparent support of negative comments, I have regularly made recently about the resilience of the forthcoming Emergency Services Network the minutes included a whole page on the subject. Nearly all the item was redacted.

Her Majesty's Inspectorate of Constabulary (HMIC) made a visit to NPAS in January and this will lead to a public consultation and an agenda for inspection in April 2017. Some doubt was raised whether HMIC had the necessary [aeronautical] competence to investigate NPAS.

The next meeting took place on 18 January so it will be some weeks before we see the content of that budget setting meeting. The December minutes can be found in all their redacted glory on the NPAS website.

*Ed: It might be interesting to be a fly on the wall at these meetings and no doubt the devil is very much in the redacted detail.*

*The apparent danger of even considering a move out of the London base at Lippitts Hill is evident. The place has been a well established [if unloved by some of the neighbours] but 24/7 squatters rights since 1967 may well prevail. Move out and the base is lost forever. The negative future planning stories coming out of Redhill and Northolt should be a warning to NPAS, the Kent Surrey and Sussex Air Ambulance and SAS. Alternatives including Elstree [new base blocked by public opinion], Boreham [slowly being dug up for gravel workings], Southend [new base blocked] and North Weald [up for housing development but still an aviation hub for at least another 20 years] should be ringing some alarm bells.*

## UNITED STATES

**FEDERAL:** Coast Guard Cutter Tahoma returned to its Kittery, Maine, homeport at the end of January after a 49-day patrol in the Eastern Pacific Ocean and Caribbean Sea conducting drug interdiction, intercepting and boarding suspected smuggling vessels. During the time on task the vessel intercepted and seized four open-hulled outboard powered panga-style fishing vessels illegally transporting contraband. The crew confiscated approximately 3,130kg of cocaine worth a street value of \$90M.

The Tahoma's embarked and employed an armed helicopter detachment from Jacksonville, Florida's Coast Guard Helicopter Interdiction Tactical Squadron (HITRON). The crew also worked alongside United States and international partner agencies to detect and prosecute these cases.

Of the crew's four seizures, three occurred within a five-day span over the Christmas holiday. Each case required a high-speed chase by the Tahoma's pursuit boat teams and use of the armed helicopter to disable the engines of fleeing suspect vessels. [USCG]

**CALIFORNIA:** With business remaining quiet in Mesa, Arizona, MD Helicopters has highlighted Huntington Beach Police Department's Air Support Bureau outstanding record of over 70,000 accident free flight hours. The Huntington Beach Air Support Bureau began flying MDHI-model helicopters in 1984 with the iconic MD 500E. The department acquired its current all-NOTAR fleet of three (3) MD 520N helicopters between 1992 and 2002.

Meanwhile the H125 continues its march towards dominance of the ALE market with confirmation that Los Angeles is to replace its current fleet of not so American AS350B2 helicopters with the home grown all American manufactured H125 [or AS350B3]. [MDHI/Airbus]

*Ed: MD can and will wave its US flags in Dallas next week but Airbus has quietly Trumped them with their 'All American' helicopter. I believe the MD500 line fuselage is still being produced in Mexico. I wonder if the President has noticed?*

The Cerritos City Council met in early February to consider whether to cut back the Cerritos Sheriff's Station and Community Center and the eliminate the Sky Knight Helicopter operation.

The building in Bloomfield Avenue, Cerritos, was opened in 1997 to provide a full range of public safety services for Cerritos residents, 24 hours a day, seven days a week. The Station serves as headquarters for Los Angeles County Sheriff's Department personnel serving Cerritos and the City's Community Safety Division.

Current Sheriff's Captain Joseph Nunez and Public Safety Manager Daryl Evans presented the findings of a study looking at several options altering the operations of the station and the helicopter programme.



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The decision to eliminate Sky Knight was straightforward, the operation needs a 180 day notice to cancel the contract, which cost the City \$21,000 per month, or \$252,000 per year.

But the cancellation of the contract would force the City to use the regular helicopters from the LA Sheriff's Department, the only other option for helicopter patrol and emergency assistance, at substantially increase costs.

LASD's Aero Bureau cross charges its helicopters at \$1,048 per hour, an analysis done by Nunez and Evans showed that if the City used LASD AS350s instead of the smaller Sky Knight for the same emergency and patrol services that occurred in August 2016, the bill to Cerritos would have been \$40,823, over \$19,000 more than Sky Knight.

Lakewood would be the only city utilising Sky Knight and the City Manager has already indicated that it is not sustainable with only Lakewood paying the fees.

The unit currently operates two Robinson R-44 helicopters based at Long Beach Airport, and flies about 1,040 hours per year. LASD purchased the two R-44 helicopters in 2015-'16 valued at \$580,000 each. In August 2016, Cerritos contributed a one-time payment of \$137,700 to the purchase.

**FLORIDA:** Southeast Aerospace (SEA) recently completed a major modification of two Bell OH-58 helicopters for St. Lucie County Sheriff's Office. The modification included an SEA designed and manufactured wider and robust milled Instrument panel with a moulded Nomex glare shield as well as a vertical pedestal panel with an 18-degree forward slant. An Aspen EFD 1000H was installed along with a Garmin GTN-650H, a Becker AR6201 VHF, and a Jupiter JA94 Audio Controller.

SEA also installed and interfaced tactical mission equipment including a TDFM-9100 Dual Band Transceiver, a Power Sonix Public Address system, Churchill Augmented Reality Mapping system, Wescam MX-10 Camera with external disconnects and a Macro-Blue Monitor and controller.

In a separate story about the St. Lucie County Sheriff's Office air operations the 2016-unit budget was compared with two others in Florida. All three compared units are situated adjacent to each other on the east coast of Florida between Miami and Cape Canaveral and they all operate examples of the DoD surplus Bell OH-58.

The St. Lucie aviation unit budget made up 1.1% of the sheriff's \$84M budget for fiscal 2016. The aviation hangar is located at 2900 Industrial Avenue Three, north of Fort Pierce.

The costs include salaries and benefits: \$583,172; Insurance: \$50,000; Repair and maintenance: \$261,250; Operating supplies: \$9,000; Fuel: \$25,000; Uniforms: \$1,600; Miscellaneous (includes training): \$4,000. Total: \$934,022 <https://www.stluciesheriff.com/>

Indian River County Sheriff's Office aviation unit budget comprised 1.3% of the agency's \$42.5M budget. There are plans to build a \$2M hangar at the sheriff's headquarters in Vero Beach but currently the unit keeps its staff and three helicopters at Vero Beach Regional Airport at an annual cost of \$17,020. Salaries

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and benefits: \$412,210; Insurance: \$15,832; Repair and maintenance: \$78,416; Operating supplies: \$17,700; Fuel: \$36,150; Uniforms: \$5,640; Miscellaneous (includes shipping charges, printing, books and publications): \$27,211; Total: \$593,159 <http://www.ircsheriff.org/>

Martin County Sheriff's Office aviation operation is financed by 1% of the of the agency's 2016 spending plan of \$59.7M. The hangar is on property at Witham Field in Stuart. Salaries and benefits: \$332,884; Insurance: \$19,563; Repair and maintenance: \$168,514; Operating supplies: \$2,800; Fuel: \$50,000; Uniforms: \$4,107; Miscellaneous (includes educational funds, capital outlay, non-mission related travel expenses): \$29,095; Total: \$606,963 <http://www.sheriff.martin.fl.us/>

On the other coast of Florida Lee County Sheriff has now started operational flying in their 2016 delivered Airbus Helicopters H125 helicopter N71LC.

The Lee County Sheriff's Office performs a wide variety of missions including law enforcement patrol and searches for lost and missing persons. The agency has a hoist installed on their new H125 in order perform additional search and rescue missions in the coastal area around Ft. Myers. Hangar One Avionics in Carlsbad, California performed the law enforcement completion on the Lee County AStar.

The H125 features dual hydraulics, dual channel engine FADEC, 30-minute take-off power and advanced glass-panel cockpit displays. Leading edge FLIR daylight/night sensor. The police role equipment includes a With a Turbomeca Arriel 2D engine, the H125 boasts a significant power reserve, along with unmatched tail rotor authority. The H125 is the ideal platform for a wide variety of law enforcement missions in varied operating environments.

Seminole County Sheriff are the lead agency in setting up an American Heroes Air Show at the Oviedo Mall, 1700 Oviedo Mall Boulevard, Oviedo, FL 32765 on Saturday, March 25, 2017. The mall is located between Sanford Airport and Orlando.

The air units expected to take part include County Sheriff's helicopters from Seminole [AS350], Orange [Bell 407], Brevard [Bell UH-1], Volusia [Bell 407], St John's [Bell OH-58], Alachua [Bell OH-58] other air operators expected include Florida Fish and Wildlife, US Coast Guard, Florida National Guard, NASA, Heli Team (a flight school operating Robinson R22, R44 and the Airbus Helicopters H120 as well as a preserved Bell AH-1 Cobra and a Hughes OH-6 (non-flyable static). Others invited include Florida Forestry and the US Navy. The website for the event is [www.heroes-airshow.com](http://www.heroes-airshow.com)



**MARYLAND:** The fleet of Leonardo AW139 helicopters operated by the Maryland State Police was grounded for inspections in late January. The cause was the discovery of paint cracking in the tail rotors of several airframes in the fleet after the first paint cracks were found on January 9 in an in-depth inspection of one helicopter.

The fleet was grounded from the middle of January 29 with the length of grounding varying from location to location. A typical minimum loss of service was the two days experienced by Trooper 3 the helicopter based at Frederick Municipal Airport although others were still grounded after five days.

Medevac services, which make up most the fleet's missions, were not interrupted during the inspections.

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A mutual aid arrangement saw other agencies undertake the urgent cases with Delaware State Police flying one medevac mission and U.S. Park Police five missions as well as five other missions undertaken by the AW139s as they returned to service.

Some of the inspected rotor blades were simply repainted and refitted to the aircraft, a total of 12 were sent to the manufacturer for further inspection.

**NORTH CAROLINA:** County officials are weighing up the contrasting merits of either adding more hangar space to the Rowan County Airport and a proposal to purchase new helicopters for the State Highway Patrol. The county wouldn't foot the bill for a helicopter, but it may need to provide additional hangar space. Coincidentally, Rowan County just finished construction of a 15,000-square-foot hangar — paid for with a \$2.4M loan.

The newest hangar is a speculative building at the airport with a view to lure new corporate jets to the airport with several potential tenants in prospect.

House Bill 34, which was introduced into the N.C. General Assembly on February 2 asks the legislature to appropriate \$18.2M from the state general fund to purchase two rescue helicopters — one stationed in the western part of the state and one in the east. Because the N.C. Highway Patrol already uses the Rowan County Airport as a base of operations it is thought likely the new helicopter would be housed there.

It was speculated that the quoted \$18.2M price tag seemed a little high for two helicopters, and might include construction of new hangars.

The main helicopter fleet operated by the NC Highway Patrol consists of elderly Bell OH-58s from 1970-71 but there is one 2008 Bell 407, acquired new, which might indicate the future fleet.

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# AIR AMBULANCE

## INDIA

**BENGALURU:** More than a month after Karnataka's first air ambulance service in Bengaluru was launched, a patient was air-lifted for the first-time last month.

Sandeep (25) an engineer from Belagavi who was in Ballari visiting a plant for inspection. While taking photographs, he fell into a pit and was exposed to toxic chemicals and gases. He suffered respiratory problems.

Hospital officials arranged for the H130 air ambulance from Aviators Air Rescue to take him to Bengaluru where he entered the ICU.



## IRELAND

**AIR CORPS:** The need for an independent air ambulance service in Eire was underlined last month when it became evident that the main existing air ambulance service provided by the Air Corps [IAC] is facing a cut back in capability due to a lack of pilots.

Last month PAN carried a story about the setting up later this year of the new Irish Community Air Ambulance (ICAA) meant to complement the existing emergency services including the Emergency Aeromedical Service flown by the IAC.

## UNITED KINGDOM

**DEVON:** Each of the UK air ambulances is facing up to night flight and operations in different ways.

In Devon, the charity is identifying and surveying number of pre-surveyed sites across the county as its primary operational plan.

Last month a new landing site for the air ambulance in Budleigh Salterton was declared open. Last year, the local soccer club was approached by the Devon Air Ambulance Trust (DAAT) to see if it could create a community landing site at the Greenway Lane ground.

The club had 'no hesitation' in agreeing to the request and, following money raised by the town council, the existing floodlights were adapted so they could be remotely switched on by the helicopter team as they approach. The lights are remotely activated by using a mobile phone to 'dial-up' the floodlights.

Similar schemes, often paid for by local authorities are being set up across the county. Sidmouth has two sport field sites owned by Sidmouth Rugby Club at Blackmore and Sidford, which will enable the helicopter to undertake a night landing and departure for the benefit of the local community. The cost there was given as £5,000.

**ISLE OF MAN:** The Island's Health Minister has confirmed a replacement air ambulance aircraft will be supplied within 90 minutes in the event of a technical issue with the plane at Ronaldsway.

Kate Beecroft revealed in this week's sitting of the House of Keys that the Department of Health and Social Care's contract with Exeter based Capital Air Ambulance, who operate the service, includes the provision for a replacement aircraft if the one based on the Island can't be used.

Mrs Beecroft also confirmed that the nearest Coastguard helicopter from the UK or Ireland can be used to transfer a patient in an emergency should the aircraft be grounded.

The Minister stressed that it's rare for faults to ground the aircraft based at Ronaldsway

**HAMPSHIRE & ISLE OF WIGHT:** The air ambulance (HIOWAA) marked its tenth anniversary by unveiling its new brand identity and Critical Care Team car to coincide with the charity's 10-year anniversary.

Since the charity's first operational flight in 2007, the service that the Air Ambulance provides to the community has evolved considerably and the new brand identity will reflect these changes.

Central to the new branding is a new charity logo. In January 2016 HIOWAA became one of the first Air Ambulance services in the country to commence night operations. The sun and moon shaped graphics incorporated in the new logo illustrate the fact that the charity's life-saving service is now available day and night, 365 days a year.

A medical cross at the centre of the charity logo represents the Air Ambulance Critical Care teams who bring their life-saving care to the most seriously ill or injured people in Hampshire and the Isle of Wight.



Highly skilled crews of Doctors, Critical Care Paramedics and Pilots can be at the scene of an incident within minutes, ready to deliver the same level of care that you would expect from a hospital emergency department. A full range of life-saving equipment is carried on board, including 2 state of the art ultrasound devices and a blood transfusion kit, helping to save valuable seconds in the vital golden hour.

The new branding will be carried on the body of the Air Ambulance, as well as on the charity's new Critical Care Team Vehicle, which has become operational across the region crewed by a team of doctors and paramedics and will have parallel capability to the Air Ambulance. The Vehicle, a specially converted Volvo XC90, will initially operate 7 days a week.

**WILTSHIRE:** The air ambulance's major fundraising appeal for its new airbase at Outmarsh Farm, Semington, is to receive a significant donation of £250,000 from the HELP (Helicopter Emergency Landing Pads) Appeal.

The HELP Appeal is the only charity in the UK that funds the development of helipads at Major Trauma Centres, key A&E hospitals and air ambulance bases across the country.

The donation will be given in two tranches of £125,000, the first has been received and the remaining £125,000 is to be paid in January 2018.

Robert Bertram, Chief Executive of the HELP Appeal, said: "Wiltshire Air Ambulance has been providing an outstanding service for many years and we are delighted to be able to support them in providing what will undoubtedly be the very best airbase in the country.



**HELP Appeal**

Helicopter Emergency Landing Pads

[helpappeal.org.uk](http://helpappeal.org.uk)



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Global ©Global SuperTanker

# FIRE

## CHILE

At the end of January An Antonov AN-124 arrived in Santiago, Chile Tuesday morning and unloaded three Bell 205 helicopters, one K-MAX 1200, and a flatbed truck with an attached goose-neck trailer. The Chilean government contracted with Helicopter Express out of Chamblee, Georgia to supply the equipment during the siege of wildfires that has been plaguing the country for the last several weeks.

The helicopters and the truck were loaded onto the Ukrainian freighter at Hartsfield–Jackson Atlanta International Airport Monday for the flight to South America. CNN Chile reported that one of the helicopters is also NVG capable.

Helicopter Express, based at Atlanta’s Peachtree-Dekalb Airport, north of Atlanta, operates a diverse fleet of aircraft that cover multiple mission profiles, but concentrate heavily on work in wildland firefighting, often having most of its fleet deployed around the country on firefighting contracts as well as work overseas.

The company operates several Bell 407 helicopters, including the new Bell 407HP from Eagle Rotorcraft, 206 LongRanger’s, multiple AS-350/H125 helicopters, Bell 205’s and a Kaman K-Max helicopter to assist their global operations. The company also operates a single EC-155 for corporate transport/charter operations.

The same emergency in Chile attracted the Global SuperTanker version of the Boeing 747. The Jumbo set a world record for liquid dropped in a single day by a land-based aerial tanker at 134,400 gallons (508,000 litres). The SuperTanker, deployed in Chile since late in January, achieved this milestone through seven sorties on Wednesday, February 1, which far surpassed the previous known world record of 110,000 gallons. The record was achieved while the aircraft assisted the country’s military and firefighters combat the worst forest fires Chile has ever seen. The SuperTanker has flown approximately 11,500



miles on 36 separate missions spanning several regions of the country, amassing over 40 hours of flying time in Chile. It has dropped a total of over 670,000 gallons (over 2.5 million litres) of water on spreading fires.

Global SuperTanker's B747-400, The Spirit of John Muir, incorporates a patented system capable of delivering single or multiple payload drops aggregating over 19,000 gallons (72,000 litres) of water, fire retardant, or suppressant. These fluids can be released at variable rates from the plane's pressurized tanks, producing a tailored response to the firefighting need. This unique ability allows it to make as many as six drops in a single flight, while other aircraft such as the C-130 or BAe-146 must repeatedly land and refuel to achieve the same results. The Spirit of John Muir is the world's youngest, most modern, and fastest Very Large Air Tanker (VLAT). With a flying speed of 600 miles per hour, the Spirit of John Muir can reach any part of the globe in 20 hours or less.

In the wake of the original developer, Evergreen International, going into administration in 2013 Global SuperTanker Services, LLC was formed in 2015, joining a strong portfolio of companies managed by Alterna Capital Partners LLC as part of its aerospace sector. The equipment in the original 747-100 is now fitted in a newer, more modern B747-446, N744ST, Tanker number 944.



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# INDUSTRY

**Bell Helicopter** is reported to be planning to end production of its Model 206L LongRanger single-engine light helicopter later this year, ending the type's 42-year-long production run. Meanwhile the post-accident grounding of the Bell 525 will end shortly and the certification process recommence.

In Arizona rotor blade manufacturer **Van Horn Aviation** (VHA) is taking several steps to minimize downtime due to overhauls on the company's composite 206B main rotor blades. In addition to working with several composite rotor blade repair stations around the world to provide authorisation for main blade overhauls, VHA is also conducting fatigue tests to increase the time between overhauls (TBO) to 5,000 hours.

Customer feedback to the company was that they assumed only VHA or Bell Helicopter would be able to complete the overhauls on the main blade. When tools and procedures are put in place it is expected that repairs will be possible worldwide in repair stations with composite rotor blade repair capability.

Having received the Federal Aviation Administration (FAA) Supplemental Type Certificate (STC) in February 2016 and Transport Canada STC in November 2016, the composite VHA 206B main rotor blade currently features an 18,000-hour service life (more than triple the life of the original metal blade) with overhauls every 2,800 hours. While beginning certification tests for the 206L LongRanger main rotor blade, the VHA engineering and test staff are already working on the fatigue tests required to bring both the 206L and 206B main blades to 20,000 hours' service life and 5,000 hours TBO. Increasing the TBO to 5,000 hours will match the service life of the OEM metal blade.

At 5,000 hours, operators will have a choice of going through a two-week overhaul on our blade or buying a new set of metal blades for roughly 20 times the price of the overhaul. The overhaul is estimated to take no longer than two weeks and cost approximately \$3,500.

Meanwhile VHA achieved first flight of its composite 206L main rotor blades today, completing ground tests, hover flight, forward flight reaching speeds of more than 100 knots, and turns with up to 45 degrees of banking during the test session at Falcon Field in Mesa, Arizona. The tests mark the beginning of the flight testing required for Federal Aviation Administration (FAA) Supplemental Type Certificate (STC) approval.



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The LongRanger main blade is based on that of the 206B JetRanger blade certificated last year. The design modifications have included a 22-inch increase in length, matching that of the OEM original married to the VHA construction method of carbon fibre skin and spars, an efficient NASA-designed laminar-flow airfoil, tapered tip, and a combination of stainless steel and nickel abrasion strips that cover the entire length of the blade for erosion and lightning strike protection.

VHA expects FAA certification of the 206L main rotor blades by the end of 2017 with a 20,000-hour service life (four times that of the OEM metal blade) and overhauls every 5,000 hours. It is a direct replacement without hub modification.

*Van Horn Aviation will be exhibiting at the Heli-Expo Booth No. 6906 in Dallas, TX, March 7-9, 2017.*

Voce Capital Management LLC, one of the largest long-term stockholders of **Air Methods Corporation** has formally told the Board of Directors of Air Methods that it requires urgent change to reverse Air Methods' dismal underperformance and to unlock stockholder value.

Air Methods has underperformed the Russell 2000, S&P 500 and its own self-selected group of "Proxy Peers" for the past one-, three- and five-year periods.

**Anodyne Electronics Manufacturing Corp [AEM]** based in British Columbia, Canada, has released of the latest product in its new family of Loudspeaker products, the LSC22 Loudspeaker Controller.

The LSC22 offers several new features, including 'record on the fly' allowing the cockpit crew to quickly record messages and then play them over the Loudspeaker system as many times as needed. This can be very useful during searches, crowd control and rescue operations. As well, the front panel AUX input jack allows for playback from other audio sources such as MP3 players, smart phones, or other equipment. NVIS compliant lighting is available on the LSC22.

*AEM will be demonstrating the LSC22 at Heli-Expo in Dallas during March.*

Gill Batteries, a division of **Teledyne Technologies**, has received an FAA Parts Manufacturer Approval (PMA) to install its new-generation 7407-28 sealed lead acid battery on all models of the Bell 407 helicopter.

In addition, Bell Helicopter has selected the new battery as original equipment aboard its new 407 GXP.

The Gill 7407-28 sealed lead acid battery provides several advantages over a NiCad battery, including the fact that it does not require the hazardous materials restrictions or any special maintenance processes and can offer up to 18 months or 1,800 hours before requiring an in-shop re-charging and capacity check. [www.gillbatteries.com](http://www.gillbatteries.com)

(Heli-EXPO booth, #5517)



**Airbus Helicopters, Inc.** and **Precise Flight, Inc.** have announced approval of the amended Supplemental Type Certificate (STC) from the Federal Aviation Administration (FAA) for the Pulselite® Bird Strike Prevention System. This approval comes as an amendment to STC SH3319NM, bringing the total number of Airbus rotorcraft models certified for the Pulselite® System to 67. This includes all EC135, H-135, EC145, H145, and AS350 models.

The Pulselite® System is an FAA certified lightweight electrical system controller that alternately pulses the landing and auxiliary lights of a helicopter, thereby increasing its visibility and reflecting the speed and directional movement of the aircraft. In addition to enhancing the margin of safety by increasing aircraft recognition, some studies have shown the Pulselite® System to reduce bird strikes by up to 66%, according to Precise Flight. "Airbus Helicopters has a long tradition of leading the rotorcraft industry in safety and innovation," said Lindsay Cunningham, Airbus Helicopters, Inc.'s Vice President of Civil Programs. "We consider the Pulselite® System an important safety option, and we are excited to add these aircraft to the list of models now certified for the system."

The recent significant increase in reported bird strike incidents and resultant aircraft damage has caused bird strikes to become a primary safety threat and financial burden to rotorcraft operators.

"The Pulselite® System is installed on more than 25,000 aircraft around the world, and has been proven to make flying safer and the business of flying more profitable," said Doug La Placa, Chief Executive Officer of Precise Flight, Inc. "Precise Flight is honoured to work with Airbus Helicopters, Inc. to offer this important safety option to their customers."





One of the 2Excel Navajo aircraft ©PAR

Some interesting, but worrying developments at Doncaster Sheffield [or Robin Hood] Airport in the north-east of England.

**Background**

Some months ago, PAvCon signed up to be held in the warm dry security of Hangar 3 at the airfield with Vulcan to the Sky a group that had been flying the last airworthy Avro Vulcan until it ran out of economical flight capability. Millions of pounds had been spent on keeping it flying 'just a little bit longer' but eventually it became too difficult for industry and various funding streams to support and it became just another static exhibit.

Its temporary home in Hangar 3 was larger than they needed, or could afford – a single Vulcan in a hangar designed to support a squadron of such bombers was always going to be challenged – but the airport was generous and it became the site of fundraising events, parties, weddings and the like and looked to be the site of PAvCon. But there was a hidden clock ticking. They had to be out as their lease 'was expiring' and a commercial company was seeking the space. In fact the lease had expired at the end of 2016 but, what are now seen to be tenuous, plans were in place securing the space for existing events to be held there in 2017 thanks to 2Excel Aviation the new tenants. They had been in part of Hangar 1, an already cramped space that the airport needed to expand for storage.

Early in February the new tenant arrived at the door and the swap took place. Vulcan and its exhibits were transferred to Hangar 1 to share greatly diminished space with a newly expanded bonded warehouse for a few months.

**New Event Hosts**

The new tenants, now in business for nearly twelve years, operate across diverse sectors including: defence, security, survey, engineering, agriculture, events, travel, and disaster response for the oil and gas industry.

2Excel's work includes: conceiving solutions to challenging aviation problems; research and development; aerospace design, production and certification; flight test and trials; training; airliner maintenance, and modification.

In 2012 they were at Farnborough exhibiting a specially equipped surveillance Piper Navajo, the current fleet of 24 aircraft still includes Navajo's. 2Excel has grown significantly in size and expanded from their Sywell base a while ago. The roomy Doncaster hangar is needed to house their larger aircraft, the pair of converted Boeing 727 airliners used for spraying detergent on oil slicks. These unique airframes are on 4-hour standby to fly anywhere in the world.

One of the Boeing's was exhibited at the 2016 Farnborough alongside a former police EC135 the company owned.



2Excel pair at Farnborough last year ©PAR

The company will retain its Sywell base where it supports The Blades, formation aerobatic display team and helicopters but further expansion at Doncaster is important.

Among the facilities 2Excel have is a cabin services trainer. [pictured right] This has already been used by local police firearms teams as good representative for tactical training but it will now be offered to a wider customer base.

In the last month, it was ascertained that holding PAVCon at Hangar 3 faces new and unplanned problems with being Airside on an International Airport. We have been at International Airports before but when at Brussels [in among the arriving Heads of State for a G8 Conference] we were somewhat removed from the reality of security of an International Civil Airport by being housed on the military side. This new scenario is currently developing in cooperation with 2Excel and the operators of the airport. Its basic form is set and the rest is the detailing.

The website has been altered to reflect the new position but you will not find many alterations. It is planned that the exhibitors will be placed around and beneath the cabin section.



Inside Hangar 3 at Doncaster Airport ©PAR



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Last month marked 50 years since the Bolkow BO105 embarked on its maiden flight, on 16 February 1967, in Ottobrunn near Munich. Conceived as a two-tonne-class light multi-purpose helicopter, cutting-edge technologies and materials led to the BO105 being the first helicopter to feature a rigid, hingeless rotor head made of titanium and glass-fibre-reinforced rotor blades.

“The BO105 has made a name for itself above all for its versatility, robustness and reliability. The fact that it is still being used 50 years after its maiden flight speaks volumes for the high quality of this helicopter. As a pioneer of modern helicopter technology, the BO105 continues to influence our product range today,” said Wolfgang Schoder, CEO of Airbus Helicopters in Germany. What became known as the Bolkow rotor significantly reduced maintenance costs when compared to traditional rotor heads with flapping and lead-lag hinges, as fewer moving parts were required. Furthermore, the BO105’s special rotor system enabled it to perform with more agility and manoeuvrability – capabilities for which it is still renowned today.

Since the helicopter’s first delivery in 1970, more than 300 customers around the world have purchased a total of some 1,400 aircraft which have been operated in air rescue, as a police and military helicopter, as well as for VIP, passenger and cargo transportation. The largest customer was the German Armed Forces with more than 200 orders. Some of these aircraft remained in service until December 2016.

Some 400 aircraft – around a third of the total number of helicopters manufactured – are still in service today. The longest-serving BO105 carries out aerial work on the Falkland Islands. In total, the BO105 fleet has clocked up more than 8 million flight hours around the world. Airbus Helicopters continues to offer comprehensive service for the light helicopter and guarantees the delivery of spare parts in the long term.

In particular, the H135 and H145 light helicopters went on to profit from the BO105’s technological achievements. The current successor model to Airbus’ BO105 is the H135. With its hingeless and bearingless rotor head, it has an advanced rotor system with a high carbon-fibre content to extend its service life. In addition, the H135 boasts further innovative features, such as a glass cockpit, an autopilot system and the shrouded Fenestron tail rotor system to further improve the safety and sound levels of the helicopter. In its role as a pioneer of technological progress, Airbus is working on future-focused programmes also today: among them are the X6 helicopter for the heavy segment, which is set to enter service during the next decade, or the City Airbus project, an air taxi for major urban areas.

You can find more information, photos and a video about the BO105 and its history on the following website: [http://www.airbushelicopters.com/website/en/ref/50-years-BO105\\_418.html](http://www.airbushelicopters.com/website/en/ref/50-years-BO105_418.html)



In Australia the police in Queensland are the last operators of the Super 5 version of the BO105 ©QPS

From Europe to the USA, **ESG Elektroniksystem-** und Logistik-GmbH will be presenting a selection of its broad service portfolio as well as the helicopter modular mission operator workstation at this month’s HAI Heli-Expo.

With this workstation external sensors and different communication devices can be controlled in order to provide all mission-critical information.

The console allows the aircraft mission operator to perform demanding missions in an easy and effective way. It is available in different configurations and can be used with many aircraft types and adaptable to meet customer preferences. The modular construction of the console allows easy adjustment to achieve the best ergonomic position for the operator. The mission management software provides the operator with comprehensive data, map and video management functions.

Visit ESG at the HAI Heli-Expo 2017 in Dallas, booth # 6927, and find out more about ESG’s fifty year heritage in development, integration and operation of complex, security-relevant, electronic and IT systems.



# ACCIDENTS & INCIDENTS

**1 January 2017 Airbus Helicopters EC130B4 N130MU.** Air ambulance of MedFlight, Columbus, Ohio. Operated by Metro Aviation, Inc. While en-route to Columbus, visibility was variable from 6-10 miles due to occasional mist. After the patient was delivered, the aircraft was re-fuelled and return journey weather was checked and indicated acceptable weather. While enroute to base and approaching the New Lexington, OH area, the weather rapidly deteriorated, reducing flight visibility to less than 2 miles. The pilot executed IIMC procedures with the autopilot already engaged, the pilot set the instruments for an ILS approach into Zanesville, OH airport, landing safely. [Concern]

**6 January 2017 Leonardo A119Kx N306LG.** Air ambulance of University of New Mexico Hospital – Lifeguard, Albuquerque, New Mexico USA operated by Seven Bar Aviation. A patient transport flight from the Northern Navajo Medical Center (Shiprock, NM) to UNMH Albuquerque performed a precautionary landing upon encountering unforecast weather. The flight had departed in VFR conditions. [Concern]

**26 January 2017 Airbus Helicopters EC145 N911MK.** Air ambulance of Avera Careflight, Sioux Falls, South Dakota USA operated by MRIS. Undertaking an interfacility transfer and in cruise flight. The pilot received several warning lights in succession including that of an engine fire and made an emergency landing with the #2 engine shut down. No injuries or further damage to the aircraft. [Concern]

**7 February 2017 Airbus Helicopters EC135 N135LG.** Air ambulance of crashed at St Helens, Beatyville, Kentucky, USA, while landing to pick up a woman injured in a car wreck. No one was seriously hurt in the accident but the flight nurse and co-pilot went to a hospital to be evaluated for injuries. As the helicopter manoeuvred to land in a field, the pilot lost control, the helicopter flipped on its side and a small fire broke out, firefighters at the scene put out the blaze. [Lexington Herald-Leader/FAA]

**14 February 2017 Airbus Helicopters AS350BA ZK-HKW** Fire fighting aircraft operated by Way To Go Heliservices. The pilot of the helicopter died in a crash while fire fighting in Port Hills, Sugarloaf, Christchurch, New Zealand. There was no fire but the airframe was badly damaged. The pilot who died was identified as David Steven Askin. [Stuff]

**16 February 2017 Bell 407 N933TG** Air ambulance of Aeromed Tampa General Hospital, Florida. Operated by Metro Aviation, Inc. Suffered two near miss incidents within a two-week period with light civil aircraft. In both incidents, it was the medical crewmember who identified the traffic and brought it to the pilot's attention. In both circumstances, the pilot had to perform evasive manoeuvres to avoid collision. The aircraft altitudes were between 1200' and 1500' MSL. Both flights were conducted under VFR during daylight hours. [Concern]

## FLIGHT SAFETY

This is a story about Rugby but it looks to have a definite synergy with flight safety and many other fields where concentration is important.

England's Rugby team management are ready to crack down on their players' use of mobile phones to improve their skills.

Visual awareness coach Dr Sheryll Calder, the recruit to the coach's team, has revealed how sporting skill levels are in decline because of the modern fixation with phones and tablets.

As part of her new role with the national squad, she will urge the players to moderate their use of the devices.

Dylan Hartley, the England captain, has already implemented a ban on the use of phones during meal times after the suggestion was made by Saracens full back Alex Goode. Now, there will be an expansion of this policy. Calder came to prominence in the build-up to the 2003 World Cup triumph and has since had success in other sports, including golf and American football.

Her study into the impact of increased use of mobile phones has been a recent but significant revelation. By encouraging them to restrict the hours spent looking at screens, she hopes to increase the players' day-to-day eye movement.

When you look at your phone, you're losing awareness. There are no eye movements; everything is static. We are losing the ability to communicate. All those skills are declining.

*Ed: Recent team performance suggests that there may be something in this advice. At the time this story appeared the England team has had sixteen wins in succession....*



Early in February Helihub published a lengthy article by aviation journalist Allan Blake setting out some major worries relating to the completeness of HUMS data.

The launch event for the article was the late December “near miss” event that occurred on a rig landing by S92A G-WNSR but he lists several other incidents that are thought to be of equal concern.

It is a long article and rather than paraphrase it I suggest you take the time to read the original at <http://helihub.com/2017/02/03/hums-safety-alert/>

In the USA the number of national and local helicopter crashes continues to drop, according to the latest Federal Aviation Administration count.

There were 106 crashes last year in the U.S., with 17 of them fatal, 12 % fewer wrecks than in 2015 and 27% percent fewer than 2013.

## UNMANNED

The Royal Australian Navy awarded to Schiebel a small contract for the supply of its CAMCOPTER® S-100 System and three years of follow-on Contractor Logistics Support. Although limited in scope this is having the potential to be a breakthrough for the Austrian company.

The US Coast Guard completed system operational verification testing of a small unmanned aircraft system (sUAS) on Coast Guard Cutter Stratton, a national security cutter (NSC) based in Alameda, California, on January 2.

The Stratton crew and UAS program officials tested the power, communications, and launch and recovery systems that make up the sUAS to ensure that all parts functioned as needed and to identify areas requiring improvement. The full system consists of the aircraft, a ground control station, and a forward and an aft directional antenna, which contain the necessary fibre optic cables needed to communicate with the



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aircraft. Installation of the system components was completed December 23; testing began a week later. *Photo: Capt. Nathan Moore, commanding officer of Coast Guard Cutter Stratton, launches the ScanEagle unmanned aircraft for the first time during system operational verification testing Dec. 30, 2016 – U.S. Coast Guard photo.*

Entrepreneurs' continue to assume that the customer will pay for their development costs of yet unproven craft. A few years ago I recall seeing a landing/search lamp on a booth at the HAI and on enquiry was told that it was undeveloped looking for a backer. It still is.

But still they come forward. The latest work tool looking for a backer is the RPS500 mini helicopter that it selling in handfuls as a training helicopter but now the manufacturer is looking for someone with deep pockets to make it into a UAS.

The original trainer works just fine but it is not clear what it is going to cost to turn it into an optionally manned version. The money likely to be involved in this seems to place it in the military sphere rather than law enforcement but first we need to accept that the market is flooded with 'ideas' that need development. The timescale experienced by the Northrop versions of the Schweitzer 333 and Bell 407 are extended and there seems to be a potential clash in this market with Leonardo and their not so new 009. This is probably going to be a limited market in the short term. Even with military money the first [the 333] faltered as the customer changed mindset and went for the bigger alternative [the 407].

A couple of years ago, it was reckoned that there were some 4,000 products seeking customers. Producing craft was so relatively cheap that 'manufacturers' could create 6 different designs for peanuts and all they needed to know was what the certification requirements were and then they would be off seeking money from industry to develop the best of the crop. At that point they found that there were not enough investors out there for developing 4,000 craft so the numbers plummeted. But still they had not actually asked the customer what they wanted they just 'sold' them the idea of a craft that could fly and lift a camera - any camera for up to 10 hours. Ten hours? Who has a spec for ten hours of coverage? Even the Super Bowl does not last that long.

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What they failed to ask themselves or the customer was the conditions under which the craft would be used and how long they would use it for. Simply producing a long list of jobs that the craft could do is not good enough. There is a massive difference between the operational tasking for military and domestic police work, the noise of an internal combustion engine and covert capability of an electric motor serve very different market sectors.

The most obvious trap was that they tried to sell police craft that were not waterproofed for traffic accident investigation. Most traffic accidents happen in the rain so any investigation would need to be in the rain not waiting for a week while it all dried out. Most UAS work is area containment and crime/accident scene recording. You will never beat the economics of a Cessna 172 or a Bell OH58 with a pilot. All craft in flight need an operator just some are not called or trained as highly as pilots.

The trouble is that historically the police make some weird purchases and that just begets a feeding frenzy. We can only hope that the Metro-Dade purchase of that Honeywell T-Hawk, the 'flying washing machine' with a two-stroke engine, was a warning to all.

Promoting any craft like the RPS500 to police that mostly want a small quad rotor for use in line of sight work should be a non-starter but as noted above that is not often the case. If a unit can afford a helicopter they may as well have one rather than pretending it is a UAV. Even the Schiebel, small and offering engine options is barely holding its head above water as far as sales go. A military or naval SAR machine at best not being bought by police even though it is out there, available and way smaller than anything optionally manned.

It is not a new idea but the proposal to link it to smaller commercial systems may be a route to wider acceptance.

Embention a UASS autopilot and multirotor craft developer based in Alicante, Spain, has released details of its latest development including highly innovative technology. The Tethered Station NM& TS150, this equipment permits the anchorage of an UAV to a ground station by using a light cable.

This cable provides to the UAV with power, and establishes full duplex communications between the control station and the drone for data, telemetry and video transfer, thus permitting to perform long duration flights and allowing a secure link to the device.

The developers claim advantages including increased in safety on the operations thanks to the tether that should be attractive to civil aviation authorities when proving the high safety of this system. The tether will greatly increase endurance thanks to the ultra-light cable connected to a continuous and unlimited power supply. The device reaches 150m height (500 feet), has secure communications through the cable, has a backup battery for emergency landings and is compatible with most multirotor systems but the downsizing of the on-board battery has the potential to increase the payload capacity thereby improving the quality and range of sensors carried.

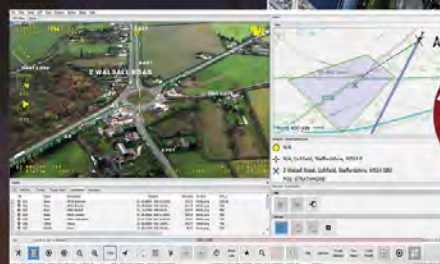
The system fits into a standard Peli-Case and is being marketed at under £10,000. [www.embention.com](http://www.embention.com)



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**PEOPLE**

On February 1 six members of Killin Mountain Rescue Team in Scotland gathered on the summit of Ben Ledi Callander, to remember Killin MRT Team Leader Sgt Harry Lawrie BEM, who lost his life in a Wessex helicopter crash, during a mountain rescue operation on Ben More, Crianlarich, on the same day in February, 1987. The team members along with his son Gordon, a former member of Killin MRT were present. The Wessex helicopter was preparing to land on Ben More when the main rotor struck



rocks on the hillside. The Wessex came down on the slope and rolled down with its occupants being tumbled about inside and outside the fuselage. Sgt Lawrie was killed when he was ejected from the door and was struck by the Wessex, team member Constable Ian Ramsay was seriously injured, but fortunately made a good recovery. Four of the members present today on the summit of Ben Ledi where both Harry and his wife, team member Jean Lawrie's ashes lie, were present on Ben More when the accident occurred. A fuller version of the story is to be found on the ALEA website Fallen Heroes pages at <https://archives.alea.org/memorial/details.asp?ID=377>

**MOVE ALONG THERE**

Strange that even the super secretive UK Home Office event Security and Policing 2017 seems to have been hacked.

The event held behind firmly closed doors at Farnborough, Hampshire is supposed impregnable so I can only assume that the recent e-mail from them offering me a full attendee list [at a price] is spurious. Mind you some doubt has been cast on the list simply because there are supposed to be 5,500 names on it. It is claimed that each Contact includes for: Business Name, Client Name, Title, Email Address, Phone Number, Web Address

What do senior officers do with their staff?

It seems to be a world-wide mystery about where the staff go. Some police forces have more staff now than they ever had but there are less and less of them to be seen on the street in recent years.

A case in point from my personal experience relates to the London Metropolitan Police here in the UK. In 1966 there were about 28,000 police who walked the street, manned cars, and looked after the office jobs with just handful of support staff. On the front line in central London stations often had officers enough to fill twenty or more patrols, beats and cars and occasionally had spares. Policing was undertaken and operated on a local level and some thought it was rustic but efficient and the people liked it. Today that same force has 30,000 officers and 6,000 support staff but claims it can barely put an officer on the road.

It seems they embraced technology but lost the ability to please the people.

## THIS MONTH

The Heli-Expo in Dallas is being heralded as the largest ever produced. The trade show, held this year in Texas, March 6–9, with exhibits open March 7–9, celebrates the commercial and civil helicopter industry with participants from around the world.

“The marketing people in Dallas like to proclaim ‘Big Things Happen Here’,” says Ed DiCampi, chief operating officer for Helicopter Association International (HAI). “We agree: we now have our biggest show ever.”

Exhibitors have booked 317,100 net square feet of show floor space, and that number is likely to climb even higher as HAI was still accepting booth registrations into last month. This net square footage figure exceeds the show’s previous record, set in Las Vegas in 2013 and will be a massive contrast to the situation last year.

This year’s event features exhibits from helicopter operators, aircraft manufacturers, and suppliers of parts, accessories, and maintenance services, among others. Just like the exhibitors, attendees span the spectrum of the industry. Operators, pilots, mechanics, students, military service members, and helicopter aficionados attend the multiday event. Attendees can seek employment, attend safety and professional education courses, catch up with industry trends, or simply enjoy the displays on the show floor.

Exhibitors will display approximately 60 helicopters across the show floor of the Kay Bailey Hutchison Convention Center, including a Boeing CH-47D Chinook, one of the largest helicopters commercially available in North America. Other aircraft expected to be on display include a Russian Mil-24 Hind helicopter, several commercial Sikorsky Blackhawk helicopters, and a variety of models from Airbus, Bell, Leonardo, MD, Robinson, Sikorsky, and other aircraft manufacturers.

Connectivity and operational efficiency and safety will be the focus of the Honeywell presence at HELI-EXPO.

At its booth, Honeywell (Booth 5423) will be showcasing a variety of helicopter technologies designed to make helicopters more efficient, safer and more connected. On the eve of the show, Honeywell will release its annual Helicopter Industry Forecast, which provides an authoritative look at industry trends.

The following sessions are open to all show attendees. Honeywell will be holding four sessions on How to Use the Connected Helicopter at 11am and 3pm on Tuesday, March 7 and Wednesday, March 8 in room A305. Join our team to hear the latest news on connectivity for helicopters.

Jim Ebken, Honeywell Product Support Engineer, will be giving the T53 technical briefing on Tuesday, March 7 at 1:00pm and the LTS101 technical briefing at 2:00pm the same day. Both sessions will be held in room 145. Jim will also be presenting a new session on the Mechanic’s Risk Matrix on Wednesday, March 8 at 12:00pm in room C143.

Tom Neumann, Commercial Helicopters Business Senior Director, and Rob Richardson, Business Manager, will cover industry products and services and how connectivity improves safety in operation during the Connectivity for Safety session as part of HAI’s Rotor Safety Challenge on March 8 at 8:00am in room C140.

Sky Force Observer and Sentinel are acknowledged to have the best user interface for presenting and accessing data from stored maps and live sensors together to improve crew effectiveness.



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## EVENTS IN EUROPE THIS YEAR

30 May – 1 June 2017 5th Annual Search and Rescue 2017 Summit Copenhagen This high-level meeting provides a unique opportunity to meet and engage with senior SAR operators and key decision-makers, as well as industry colleagues working in this important field. SAR experts who will address strategic elements of search and rescue, including planning, technology, procurement and budget prioritisation, include: Rear Admiral Georg Larússon, Commander - Icelandic Coast Guard, Mr. Richard Parkes, Director of Maritime Operations - UK Maritime and Coast Guard Agency, Mr. Leendert Bal, Head of Operations - European Maritime Administration, Ms. Mirjana Cizmarov, Director General - Serbian Civil Aviation Directorate, Captain Jori Nordstrom, Head of Operations - Finnish Lifeboat Institution, Mr. David Jones, Chief Executive Officer - Rescue Global, Mr. Bjørn Bay, Chief of Police - Greenland Police, Mr. Karel Nemeč, Head of RCC Slovakia - LPS SR, Group Captain Shabbir Ahmad, SAR Coordinator Karachi Airport - Pakistan Civil Aviation Authority. 2016 has been a significant year for SAR operators, with 2017 likely to be just as challenging. We have seen the continuation of the migrant and refugee crisis in the Mediterranean and Aegean Seas, as well as several tragic, high-profile incidents such as the Puma Crash off the Norwegian Coast in 2016 that have drawn SAR operations into the public eye. These missions have highlighted the need for mass-rescue capability, the most rapid location and response times feasible and effective technical solutions +44 (0) 207 036 1300 E: [enquire@defenceiq.com](mailto:enquire@defenceiq.com)

20-22 June 2017 Borders & Infrastructure Expo [IFSEC] ExCel, London. Join other high-end security professionals at the launch of Borders & Infrastructure Expo, in conjunction with Europe's most renowned security event, IFSEC International, addressing needs for large scale security projects including Drones &



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17-18 October 2017 15th Aerial Fire Fighting, Nimes, France. Supported by the Ministry of Interior, Securite Civile. Tangent Link brings the 15th Aerial Firefighting Conference to Europe to debate, learn and acquire the skills and lessons-learned for safe aerial firefighting. The provisional conference programme covers Interoperability of EU aerial firefighting resources, Training & Simulation, Aerial Demonstration, Suppressant & Retardant Technology breakthroughs and Aerial Surveillance Aircraft & Systems. <http://tangentlink.com/event/aerial-firefighting-europe-2017/#programme>



2-3 March 2017 U.T. SEC - Unmanned Technologies & Security Expo & Conference in Nuremberg. As the first worldwide platform to do so, U.T.SEC will be presenting in its entirety the future theme of unmanned technologies with the focus on security. The focal point is the technical and legal possibilities of increasing security. This also entails protection against unwanted entry by unmanned vehicles in civil, industrial and state areas.

The monitoring and control of transport, infrastructures or industrial facilities and the energy industry along with the application of these technologies by police, fire brigade, disaster protection and other emergency services form the focal point of U.T.SEC. However, at the same time, with the growing number of possible applications, new questions surrounding the issues of factory and company safety are also arising as well as no-fly zones and flight-restricted zones for example for airports, football stadia or industrial and state facilities and institutions. The U.T.SEC Expo and Conference in Nuremberg will be looking at these aspects from a 360-degree perspective and presenting solutions. [www.utsec.de/en](http://www.utsec.de/en)

10-11-12 March 2017 European Drone Expo Brussels Expo Heysel. Check out the 20% rebate on the booking of a booth for all European Drone Federations + free subscription for the B2B Area. There is a 10% rebate on the booking of a booth for affiliates of a European Drone Federation + free subscription for the B2B Area. For all European Drone Federations and their affiliates: 100€ - instead of 120 € - to subscribe for the B2B Area only. [www.drone-days.be](http://www.drone-days.be)

4-6 April 2017 Milipol 2017 Singapore Global Security Asia [GSA]. Asia Pacific's Premier Exhibition & Conference on Counter Terrorism and Security GSA has a reputation as the premier International Exhibition and Conference focusing exclusively on Counter Terrorism, Internal State Security, Law Enforcement and Civil Defence in the Asia Pacific Region.

GSA is now organised in partnership with MILIPOL, the Largest Security Show in the World. GSA, with its sister Shows MILIPOL PARIS and MILIPOL QATAR, will now deliver and showcase Homeland Security and Counter Terrorism Systems and Technologies from around the World.

5-8 April 2017 The AERO Friedrichshafen. AERO Friedrichshafen first began as part of the motorsports exhibition. In 1978, the trade show included for the first time some exhibitors from the aviation sector who presented gliders and motor gliders. From 1982, the trade fair duo, which was now called RMF-AERO, made a name for itself until AERO separated from RMF in 1993 to become a full-blown, internationally recognized trade show for general aviation. The success of AERO has depended not only on Friedrichshafen's reputation as a cradle of aviation, which was initiated by Ferdinand Count Zeppelin in the year 1900, but also on a fast-growing ultralight aircraft sector. The Business Aviation segment was launched at AERO 1995 and strong expansion especially in the fields of avionics, aircraft maintenance and services was implemented in recent years. In 2002, Messe Friedrichshafen moved to its new facilities, right next to the airport, giving a strong boost to AERO's continued growth and development into the world's leading trade show regarding innovations for general aviation.



18-20 April 2017 Rotorcraft Asia helicopter show operated by Experia Events the inaugural Rotorcraft Asia helicopter show to be held in Singapore at Changi Exhibition Centre. Dedicated to the thriving Asia Pacific market, Rotorcraft Asia will gather the global civil helicopter industry in Singapore, catering to the growing civil, medical, rescue and parapublic aviation demands in this flourishing region. [www.rotorcraft-asia.com](http://www.rotorcraft-asia.com)

9-11 May 2017 Critical Infrastructure and Resilience Europe The Hague, Netherlands. A line up of international experts sharing their experiences and knowledge, offer a conference for the protection, security and resilience of critical national infrastructure. Book your place online at [www.cipre-expo.com/onlinereg](http://www.cipre-expo.com/onlinereg).



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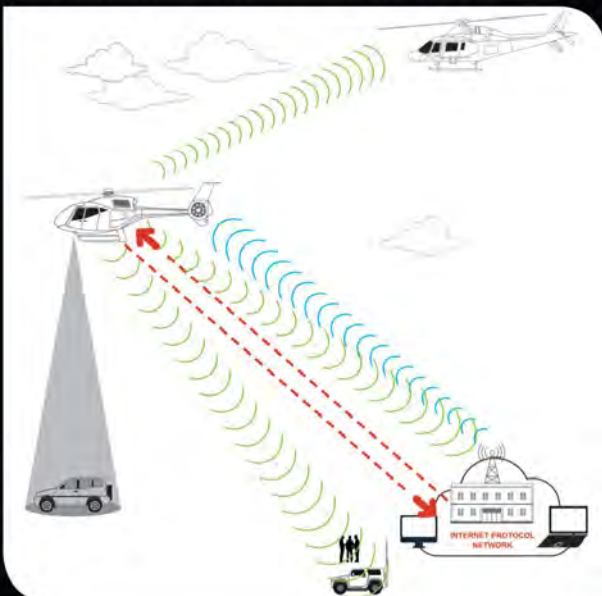


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23-24 May 2017 MARITIME SEARCH AND RESCUE, Radisson Blue, Helsinki, Finland. Now in its 2<sup>nd</sup> year, supported by the Finnish Border Guard and chaired by Andrew Winbow, Former Assistant Secretary- General and Director of Maritime Safety Division, IMO. The event's key focus for this year is *Innovative Technology and Tactics for Maritime SAR*. [www.tdnuk.com](http://www.tdnuk.com) +44 (0)1245 407 944 The Development Network Ltd., Chelmsford, Essex CM2 0ND. *Increased vessel traffic and diverse and often volatile cargoes create a potentially lethal scenario for rescuers. Furthermore, Arctic rescue missions offer their own challenges due to harsh weather, reduced visibility and dangerous ice conditions disrupting everything from communications to navigation. Maritime Search and Rescue 2017 brings together communities who deliver an effective and streamlined response.*

One of the solutions are National Maritime Incident Response Groups. Furthermore, equipment and procedures that aid combatting ship fires, undertaking Arctic operations and dealing with chemical spills are amongst the areas that will be analysed at this year's event. The conference will explore the biggest challenges currently facing search and rescue organisations whilst looking forward to future partnerships, research and technology. [www.maritime-sar.com](http://www.maritime-sar.com)

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