



# The Air League Newsletter

Issue 1: January/February 2015

## ALLIES HELP UK IN ATLANTIC SEARCH

**R**ecent events involving unidentified submarines operating in European waters have once again highlighted the current inadequacy of Britain's maritime air capabilities when it comes to searching for and identifying potentially hostile underwater activities around the British Isles. A report in the US magazine *Aviation Week*, published in December and confirmed by Canadian sources, described how US, Canadian and French maritime patrol aircraft had been despatched to RAF Lossiemouth in late November following a request by the UK to provide assistance. It is understood that this was not a regular exercise.

While the MOD and participating air arms have not commented on the detail of these operations, the *Aviation Week* report stated that the call for help in conducting an airborne sea search followed the sighting of a periscope in the waters used by Britain's nuclear submarines when they head in or out of their base at Faslane. The Royal Navy was also involved but has no specialised ASW air assets other than helicopters. Since the demise of the RAF's Nimrod MR2 fleet, the UK has no long-range specialised patrol aircraft with the necessary ASW sensors and mission systems, even though other aircraft can be used for radar or visual searches, but which are ineffective if the submarines are submerged. The RAF was previously one of the world's leading operators of specialised ASW aircraft and systems, with the capability

to locate, identify and track, as well as attack, submerged submarines by using a variety of different highly sophisticated techniques. Co-operation between RAF MR squadrons and those in US, European and Commonwealth air arms established over decades a close working relationship that is now kept alive, on a minimalist basis, by retaining a few "Seedcorn" specialist crews who fly with Allied MR operators in the hope that one day the UK may re-generate this essential capability. It is believed that such a move came close to being decided earlier this year, but since then has now been put back into the internal debate leading up to SDSR 2015. In the meantime, the protection of the UK's maritime interests are increasingly dependent on the goodwill, agreement and availability of Allied air assets.



*ABOVE - Operators of maritime patrol aircraft, such as in this modernised P-3C Orion, can draw on a range of optimised sensors, from synthetic aperture radar, capable of detecting a periscope in high sea states, enhanced vision electro-optical turrets, sonar systems and exhaust and magnetic anomaly detection, in the search for surface targets or submerged submarines.*

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# Red Arrows 50<sup>th</sup> Banquet



ABOVE - Leading Edge helpers with the Red Arrows

The Air League was honoured and delighted to be invited by The Chief of The Air Staff to organise the Official 50th Anniversary Banquet to celebrate the 50th Display Season of the Royal Air Force Aerobatic Team – **The Red Arrows**. The Banquet was held in Lincoln's Inn on Monday 20 October attended by many of The Air League's corporate and individual members, as well as by most of the senior figures from the Royal Air Force and the Defence Industry based in the United Kingdom. The Air League Chairman, Mr Christopher Walkinshaw presided over the event and the Air League President, Sir Brian Burridge, welcomed guests to this highly prestigious event prior to saying Grace. The principal speaker, Chief of the Air Staff, Air Chief Marshal Sir Andrew Pulford, said he was enormously grateful to The Air League for organising such a wonderful event, and praised The Air League for its on-going work in support of young people. The event raised upwards of £115,000 to help with the charitable aims of The Air League Trust.



ABOVE - The Chief of Air Staff, Red 1 and the Chairman

## The Air League in Parliament

On 5 November, Robert Goodwill MP, Minister of Aviation, addressed MPs, Air League members and guests in the House of Commons on the subject of British Aviation policy. He started his speech by stating that with global air links to 360 destinations, London was still one of Europe's best connected cities and aviation in Britain had an annual turnover of £53 billion, employing 220,000 people directly, with many times more through the supply chain and service sector. He said that the Davies Commission was looking in detail at the London hub issue, and had issued an interim report, confirming options were now concentrated on Heathrow and Gatwick only. The final report was due next year, after the next General Election, and then a final decision would have to be made "for the long term". He also discussed policy towards General Aviation and the "Red Tape Challenge" on proposals for some deregulation of the sector which had received

some 500 responses "from Fife to Biggin Hill". This had indicated where some GA rules could be relaxed, supported the extension of the validity of pilots' licences and attempted to balance the needs of aviation with external impacts, such as environmental issues. A new GA strategy report was expected next Spring. On the subject of eco-friendly aviation, the Minister said that progress had been made in all the key areas of Co2 emissions, noise and air pollution. There was EU-wide agreement on European emission levels, he said, and by 2016 new global measures should be in place, and negotiations were underway involving ICAO. He hailed the 70% reduction in jet noise compared to the level near airports in the 1960s, and said this was the sort of progress that would help maintain a flourishing aviation industry in the future, attracting new, young, aviators into the sector. A lively question and answer concluded the evening.

## LESSONS PAST AND PRESENT

**W**ith a General Election just months away, further deep cuts in public spending on the horizon and no sign of defence on the Westminster agenda, it seems fruitless to speculate on what might emerge in the next Strategic Defence and Security Review. But the planning for national defence should not be just an academic exercise that can be adjusted as the short term economic situation fluctuates. Despite promises that it would be needs-driven, and not just another salami-slicing exercise, that's exactly what SDSR 2010 turned out to be. While continuing to support a policy of power projection to protect UK interests at home and overseas, it nevertheless stripped bare Britain's land and carrier-based maritime air power for at least a decade, and culled even further the number of RAF combat air squadrons while massively slashing the number of personnel wearing light blue uniform. It had the most dramatic impact on UK air power since the Defence White Paper of 1957, and like that infamous document, its legacy will shape for years to come what the UK can, and cannot do in terms of air power.

Back in 1957, the then Defence Minister, Duncan Sandys, announced that the future firepower of the Royal Air Force would be vested almost entirely in missile systems. At a stroke his policy halted every advanced British supersonic military aircraft programme, with the sole exception of the P1 Lightning, which was already at the flight test stage. The same Defence Review also halved the number of home defence fighter squadrons overnight. The cancellations decimated the aircraft industry's supersonic hopes for the future and left Britain's traditional aviation export markets to the Americans and French, who subsequently supplied thousands of F-104s, F-4 Phantoms and Mirages. Then, as the dust settled on closed British factories, the flawed all-missile defence policy was abandoned! The RAF bought US-built replacements for the cancelled projects as even the follow-on generation that emerged in the early 1960s were also cancelled, except for the Buccaneer and privately-developed P1127. That the resilient UK aerospace sector managed to survive, mostly via European and Transatlantic cooperative agreements, remains a near miracle. Consolidation was inevitable, and the few new aircraft, including the Hawk, Harrier and Jaguar, launched by large domestic orders, sold well, but there were signs that Britain was losing its expertise and reputation in some areas of capability. A prime example of this was the Nimrod AEW3, which had become too complex, too expensive and too late, so it was eventually cancelled, wasting £billions. Yet successive governments proceeded to repeat similar mistakes with the Nimrod MRA4. As the numbers on order fell from 21 to just 9, the wish list of what it was expected to do kept growing – in addition to ISTAR, ASW and MR was added long range attack, armed with Storm Shadows. By 2010 after 13 years of development, it still wasn't ready. Crucially, nobody could say how much extra it would cost, or how long it would take, to put it right. It was the classic case of attempting to put excellent wine in a broken bottle, supposedly to save money.

There was never any prospect of export orders and more £billions were wasted, though the UK taxpayers' loss was the US taxpayers' gain as the mission system developed by Boeing became the basis for that in the P-8 MPA for the US Navy. While the decision to cancel Nimrod MRA4 is understandable, leaving this previously essential capability unfilled is indefensible. So too is the decision to plan to order so few F-35s that only one operational squadron can be formed by 2020-21. The idea of inviting the US Marines to use its own air assets in the meantime for jet operations aboard HMS Queen Elizabeth is just one more example of how dependent the UK has become on others to provide what should be, and always have been, key national defence capabilities.

The government no longer talks of regeneration leading to Future Force 2020. The decade of UK military involvement in Afghanistan cost over £30 billion, yet today the RAF doesn't even appear in the Top Ten list of world air force fleets, while France rates No 7. The greatest damage to UK defence capability has not come from overseas enemies but from governments who have lacked the will to overcome Treasury indifference to the strategic consequences of failing to allocate sufficient resources to defence. The wider case for defence, beyond celebrating Service achievements, has never been successfully managed and it has suited governments to play down the risks being taken with so many capability gaps. Already the former Defence Secretary, Philip Hammond, has had to eat his words – thanks to IS – regarding his comments last year that the UK public has lost its inclination to support overseas military campaigns. The bitter reality of defence policy in the UK today is not that there is no money, for the budget was £2billion underspent last year, but that defence funding is given too low a national priority, and as there is no public pressure for change, it probably won't – until more people realize just how weak our defences have become.

**2**014 was another year of aviation progress as new aircraft, the Airbus A350 and the Boeing 787-9, entered service in the booming civil market, and in the UK, the Davies Commission concluded that London's future runway capacity requirements would best be served by additional runway capacity at Heathrow or Gatwick. The final decision will have to be made by the next government after the 2015 final report is published. Meanwhile, the new Heathrow Terminal 2 opened to passengers. The government announced that Air Passenger Duty taxes would no longer apply to young children, later extended to cover all under 16. Following the result of the Scottish referendum, the Scottish government would be allowed to abolish APD at Scottish airports, and this has been met by strong opposition expressed by other airports in the North of the United Kingdom.



ABOVE - An impression of what a low flying, stealthy Anglo-French FCAS might look like (BAE Systems photo)

The international space sector continued to expand as a new generation of launch vehicles edged closer, while space exploration achieved another first, with the successful landing of a European probe on a comet, after a ten year, 300 million mile journey by the Rosetta space vehicle. Tragedy involving the destruction of the Virgin Galactic SpaceShip Two during a test flight set back prospects for an early start to space tourism.



ABOVE: Farewell to the Lockheed Tristar, which has provided the RAF with strategic tanking and transport since the 1980s. (Editor's photo)

Back on Earth, the decade-long military operations in Afghanistan drew to a close, with the final draw-down of British combat troops and supporting air power. But no sooner had final preparations been completed for the repatriation of the last UK military air detachments, the new threat from IS terrorists sweeping across Syria and Iraq, saw British Chinook helicopters and Tornado jets once again flying to Cyprus and then over Iraq to protect civilians from being attacked. In Africa, more RAF air assets were



ABOVE - A 39 Squadron Reaper UAV (RAF/MOD Crown Copyright)

deployed in the form of Tornados to fly over war-torn Northern Nigeria, providing reconnaissance for ground troops. Earlier in the year, RAF Sentinel radar aircraft were also dispatched to West Africa in conjunction with French forces to combat more roaming Islamic extremists in remote regions of Mali. In the UK, the last RAF C-130Ks and TriStars were retired, with the arrival of new Airbus A330 Voyager tanker-transport. Announcements were also forthcoming confirming the decision to complete development of the Castor-E AESA radar destined for later Typhoon combat aircraft, and to speed the introduction of additional weapons on the Typhoon fleet to allow more aircraft to take on an attack role as well as interception.

By the end of the year orders were finally placed by the MOD for the first four production F-35s. The first of the

# AVIATION YEAR



*ABOVE: The First World War was remembered in many air displays, such as this, with replica Sopwith Triplane and BE2 over Farnborough (Editor's photo)*

new carriers, HMS Queen Elizabeth, also took to the water for the first time in the summer, and will now be fitted out prior to deck landing trials due to start in 2018. Although originally due in 2012, the F-35B is now due to become operational by 2021, with an initial 14 aircraft. 2014 saw the addition of a second RAF Reaper squadron, while the Army's Watchkeeper saw operational use in Afghanistan for a few months. It is expected that both these unmanned drones will remain available in the Middle East to contribute to the surveillance task, and in the case of Reaper, also in the light attack role. The first RC-135 Rivet Joint R1 entered service and was



*ABOVE - The Airbus A350 achieved certification during the year and entered service with its first customer, Qatar Airways. (Editor's photo)*



*ABOVE: Size comparison between the outgoing HMS Illustrious, now retired, and the new HMS Queen Elizabeth. (BAE Systems photo)*



*ABOVE - The two preserved Lancasters, from the RAF Battle of Britain Flight and the Canadian Warplane Heritage Museum, thrilled the air show crowds by flying together during the summer of 2014. (Editor's photo)*

immediately dispatched to the Middle East for use in the electronic intelligence gathering role. 2014 also saw the first Mk 6 Chinooks delivered and the start of the hand-over of the RAF's Merlin Mk 3 helicopters to the Royal Navy. An Anglo-French agreement was signed to invest further in the joint feasibility study of a new joint Future Combat Air System, combining experience from the Neuron and Taranis remotely piloted air vehicle programmes and which might lead to a new production programme for service from 2030. This futuristic vision was in complete contrast to the many events throughout the year, marking the centenary of the start of the First World War.



*ABOVE: Returning squadron air crew from the last Afghan Tornado detachment are welcomed back to RAF Marham. (RAF/MOD Crown Copyright)*

# INDUSTRY NEWS

## **Boeing and Ryanair have finalized an order for 100 737 MAX 200s, valued at \$11 billion at current list prices.**

The order, originally announced as a commitment in September, includes options for 100 additional 737 MAX 200 aeroplanes, and makes the Irish low-cost carrier the launch customer for the newest member of the 737 MAX family of aeroplanes. “Ryanair is proud and honored to become the lead operator of Boeing’s ‘game changer’ 737 MAX 200 aircraft, which will expand our fleet to approximately 520 aircraft by 2024 and create another 10,000 new jobs for pilots, cabin crew and engineers in Europe, while allowing us to grow traffic from 82 million passengers last year to over 150 million by 2024,” said Ryanair CEO, Michael O’Leary. “These new ‘game changer’ aircraft will allow Ryanair to lower our costs and airfares, while improving our customer experience.” The 737 MAX 200, a variant based on the successful 737 MAX 8, can accommodate up to 200 seats, increasing revenue potential and providing customers up to 20 percent better fuel efficiency per seat than today’s most efficient single-aisle aeroplanes.

Boeing developed the 737 MAX 200 in response to the needs of the fast growing low-cost sector, which is forecasted to account for 35 percent of single-aisle airline capacity by 2033. While the heart of the single-aisle market will remain at 160 seats, the 737 MAX 200 will provide carriers with up to 11 more seats of potential revenue and up to 5 percent lower operating costs than the 737 MAX 8, and incorporating the latest technology CFM International LEAP-1B engines, Advanced Technology winglets and other improvements. More than 50 customers have ordered more than 2,550 737 MAXs.

**A UK test team including personnel from BAE Systems,** has successfully completed initial aircraft handling trials for ASRAAM and Paveway IV weapons on the F-35B Lightning II aircraft at Patuxent River Naval Air Station in Maryland, United States. The trial or ‘dummy’ weapons rounds, which are identical in fit and form to the operational weapons, were tested on the Short Take-off Vertical Landing (STOVL) F-35B for the first time during a series of flights from the US Navy’s test facility at Patuxent River Naval Air Station. The initial tests are an important step in integrating weapons onto the F-35B, allowing test pilots to understand how they affect the way the aircraft performs and handles. The UK’s Royal Air Force (RAF) already uses ASRAAM and Paveway IV on its existing combat air fleet. The successful tests are a step towards full interoperability between the current and future fast jets that will be used by the RAF and the UK’s Royal Navy from 2018. Two F-35B STOVL aircraft, flown by Billie Flynn, Lockheed Martin’s F-35 test pilot and Squadron Leader Andy Edgell from the RAF, completed 9 flights with MBDA’s ASRAAM missiles and Raytheon’s Paveway IV laser guided bombs. The flights involved different configurations

of both weapon types on the aircraft. The successful tests will be followed by the next stage of weapons testing due to take place in early 2015. These tests will involve weapon separation and then guided releases of both ASRAAM and Paveway IV from the aircraft. BAE Systems’ lead test pilot for F-35, Pete ‘Wizzer’ Wilson, said: “The team at Patuxent River has got over two thousand hours of flying under their belts for the F-35B variant and the handling and performance of the aircraft has shone through throughout. These latest trials were no exception and help us to move confidently into the next phase of weapons testing.”

**The first two Airbus A400M Atlas military transport aircraft were delivered to RAF Brize Norton in November.** They will be used for training before the first squadron is formed in 2015.

**Heathrow has announced plans to extend its property compensation scheme should an additional runway be built at the airport.** In May the airport announced plans for 25% above unblighted market value compensation for 750 homes that would be subject to compulsory purchase. Having listened to local residents, Heathrow is now proposing to extend this offer to cover homes that will be in close proximity to a new runway but will not be compulsorily purchased. Under the improved scheme, residents living in communities close to a new runway will have the choice to either remain in their home or sell their home at 25% above unblighted market value once the new runway is under construction. For a £250,000 property, homeowners would receive £312,500, plus £7,500 stamp duty costs and any legal fees. Homeowners in Poyle, Colnbrook, Brands Hill, Harmondsworth, Sipson, Harlington and Cranford Cross will be covered by the improved scheme. Properties in Longford and parts of Sipson and Harmondsworth are covered by the previously announced compulsory purchase area scheme. The offer is subject to regulatory approval by the CAA. Approximately 3,750 homeowners’ properties would be eligible for compensation under the revised scheme.

**Rolls-Royce celebrated the delivery of its 1,500th Trent 700 engine, with customer AirAsia X.**

The engine first entered service in 1995 as the first member of the Trent engine family – today it has accumulated more than 30 million flying hours and is in service with 66 operators. More than 1,650 Trent 700s are now in service or on firm order, making it the largest Trent engine fleet in service. It is the clear engine of choice on the Airbus A330neo aircraft that it powers, winning 67 per cent of new orders over the last three years and accounting for a similar percentage of future A330neo deliveries. Experience from the Trent 700 has also gone into the new Rolls-Royce Trent 7000 engine that powers the Airbus A330neo aircraft. AirAsia X has selected 50 of the aircraft.

# YOUTH IN AVIATION

**O**n 29 October, the Air League hosted the fourth Youth in Aviation event in the Cholmondeley Room in the House of Lords. Kindly sponsored by Baroness Gibson of Market Rasen and generously supported by Boeing, it proved a good opportunity to showcase not-for-profit youth organisations that are passionate about introducing the challenge and excitement of aviation to youngsters from all backgrounds. The theme this year was to highlight STEM opportunities with charitable aviation organisations that are nurturing tomorrow's talent. Many parliamentarians and leaders of industry attended and the event proved to be a resounding success.

*BELOW - Youth in Aviation Chairman Andrew Perkins*



*ABOVE - The Air Cadet stand*

*BELOW - Air League stand*



## LEADING EDGE *visit to Coningsby*

*from Liam Molloy*

The visit to RAF Coningsby has certainly been one of the best experiences that I've had with the RAF and Air League so far. From seeing the Lancaster and Spitfire to flying the Typhoon simulator, the day offered a fantastic range of activities. As a result, I have been able to further my understanding of the role of RAF Coningsby and the fleet of Typhoons stationed there. The most memorable part of the day for me was the flight in the Typhoon simulator whereby all of us had the opportunity to use it. This gave us an idea of the power and performance of the aircraft while we attempted low level flying and intercepting other aircraft! We were lucky enough to visit an E3 Sentry which was staying on the base while the runway at RAF Waddington was being resurfaced.

The visit involved a social evening on the day of arrival which allowed everyone to get to know each other. Staying in the officers mess was fantastic and thankfully, all the officers were more than happy to talk to us about their careers and what life is like in the RAF, which I know was extremely useful for many of us there.



# VISIT TO HEATHROW

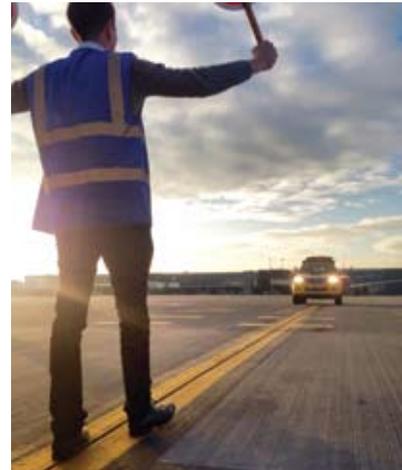
Leading Edge members were invited for a truly unique 'behind the scenes' look at Heathrow when they spent the day with the Airside Safety Department (Operations) on Friday 5th December. The day began with an overview of the role performed by Airside Operations and the duties they're responsible for. These include runway inspections, marshalling and wildlife hazard management as well as dealing with various emergencies and incidents that occur. After a tour of the airfield to familiarise the group with the airside environment it was time for the aircraft visit, which this year was a Boeing 787 courtesy of British Airways. Explanation of the various systems was provided by Fleet Duty Engineer James Flanagan, a Leading Edge member himself. James said "As a participant in last year's visit, I wasn't expecting to be working at Heathrow and welcoming Leading Edge members onboard one of British Airways' newest aircraft. It was great to have such an enthusiastic group".

After lunch it was time for the group to learn the ICAO marshalling signals and begin practicing initially with a vehicle. Once they had honed their technique, it was time for the real thing. Liam Molloy said "Marshalling an aircraft for the first time, in my case an Aer Lingus A320 was a pretty daunting experience but great fun!"



As the sun began to set it was the ideal time ascend Heathrow's 87m tall ATC tower and take in the stunning views of the airfield and see the activity from above. Finally before wrapping up there was time to call into the ASD Control Room and see the FOD radar system which helps safeguard the runways, the only one of its kind in the country designed specifically for Heathrow by QinetiQ in 2008.

Louis Weston, who's in his first year on the Air Transport Management BSc programme at Loughborough University said "The day was amazing - with the Air League being the only organisation to be given this level



of access at Heathrow we made the most of it and feel lucky to be given the chance".

With the department in its final week in their old building in the centre of the airfield, the group had a tour of the brand new purpose built facility in the far North Eastern corner of the airfield. Airside Operations Officer and Deputy Chair of the Leading Edge panel Joe Audcent said "It was a real pleasure to bring such an interested and enthusiastic group to Heathrow and show them the role the Airside Safety Department play in keeping Britain's hub airport operating at maximum capacity. Through explanation of some of the intricacies here and the interaction with NATS, airlines and handling agents the group will have hopefully gained a useful and interesting understanding and enjoyed the experience".

## CDS SPEAKS TO THE AIR LEAGUE

On 26 November, Chief of the Defence Staff, General Sir Nicholas Houghton, addressed members and guests of the Air League at the Annual Sir Andrew Humphrey Memorial Lecture. The title of his talk was "Lions led by Donkeys?" which generated much interest as he reviewed the relationship between those in uniform and their leaders, and suggested this subject had been presented to the public through much caricature over the years.



### New Members

**Individual Members:** Sara Ashdown, Ian Atkinson, Ruhul Aziz, Steven Barbour, Melissa Barlett, Jordy Black, Alex Blackburn, Gemma Bowsher, Buyant Brouwer, Frank Butterfill, Ian Cheung, James Fowler, Kyle Hamilton, Alistair Hammond, Andrew Jewell, Tristan Johnson, Cameron Johnston, Stuart Keane, Ryan Keyte, Matthew McCrudden, Sean McCusker, Guglielmo Marengo, Joshua Nelson, Vasil Nikolova, Orla O'Dea, Benjamin Pinner, Christopher Rickett, Simon Roberts, Charlie Ryde, Jack Savage, Christopher Smith, Edward Smith, Debbie Taylor, Luke Taylor, Jayne Thomson, Toby Walker, Jeremy Wooding, Charlie Xu

### Diary Reminders

28 March 2015: Young Aviators Dinner  
5 May 2015: Council meeting

For up-to-date information on all our activities please visit our website at [www.airleague.co.uk](http://www.airleague.co.uk) where you can register for changes to be sent to you by email as they are announced.

## THE AIR LEAGUE

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