



# The Air League Newsletter

Issue 3: May/June 2016

## AIR SAFETY UNDER CLOSE SCRUTINY

**A**s the summer air show season moves closer, organisers are studying in great detail the final report from the Civil Aviation Authority's Civil Air Display Review, which has confirmed a series of measures that are aimed at improving safety. This official initiative resulted from the tragic Shoreham Air Show accident in August 2015 in which several civilians were killed or injured when a vintage Hawker Hunter jet, which had been conducting an aerobatic sequence, crashed onto a main road traffic crossing beyond the airfield boundary. The CAA review has involved a broad review of the way air shows are regulated in the UK, and follows an initial investigation into the way present display safety requirements are implemented, and where new measures are needed. This includes enhanced risk assessments for displays and strengthening requirements for areas such as training and checks for those overseeing displays, and the experience, skill and health of display pilots. Some of the new measures include strengthening of post-display reporting requirements, with attention to feedback and safety reporting, increasing the distance between the display line and the crowd line where this was previously less than in place for military displays, increasing the minimum altitude for aerobatic displays by ex-military jets and strengthening the competency requirements for pilots flying civilian-registered ex-military jets. Anything which enhances safety at air shows will be welcomed, but many hope that the new measures are not over-draconian in implementation to the extent that organisers face unrecoverable extra costs and administrative burdens, or that the air displays lose the special appeal that makes them so popular to millions of spectators every year. Larger exclusion zones covering land near the ends of air show runway approaches are already raising new issues, restricting commercial activities and causing problems for other organisations apart from show managers. The Shoreham incident did not impact on spectators actually in the air show itself, and was the first tragic event of this kind since 1952, after thousands of accident-free air displays over subsequent years. They remain very important in informing as well as thrilling the general public.

A second, and growing, air safety fear became headline news recently when a British Airways A320 carrying 137 passengers and crew hit a small drone while flying over Richmond Park at 1,700ft on its approach to Heathrow Airport. The airliner was not damaged this time, but the contact was just one of scores of reported incidents involving drones, which can be bought in toy shops or on-line, with no

restrictions on who is purchasing them. Last year there were 40 drone/aircraft near-misses reported in the UK. Although there are CAA safety rules for flying these devices, this is not enforceable unless a wrongdoer is apprehended in the act of breaking those rules and few users are thought to be aware of them. There is now mounting pressure for registration and perhaps the fitting of mini-transponders or a sense-and-avoid system to prevent conflicting aerial movements, and for airborne identification so that airports and aircraft can be made aware of drones entering a flight path area. There is also the very obvious fear that they can be used deliberately to cause harm to aircraft, and are thus a potentially major security threat.



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# *In memoriam*

## **Captain Eric ‘Winkle’ Brown CBE DSC AFC RN**

Captain Eric ‘Winkle’ Brown RN, who died on 21 February 2016 at the age of 97, was a good friend of the Air League. The CEO, Andrew Brookes, was invited on to ITN News at Ten to give a tribute. “Eric flew 487 different types of aircraft, made 2,407 deck landings at sea and 2,721 take-offs, world records which are unlikely ever to be broken. He made the first landing of a jet aircraft – a Vampire – on an aircraft carrier in 1946, and in his later career he flew the Royal Navy’s finest and last(!) British naval bomber, the Buccaneer. We will not see his like again.”



*Eric after receiving the Air League Founders Medal from the Patron in 2015*

### **The Editor adds:**

Not content with a quiet retirement after the most incredible flying career ever, Eric “Winkle” Brown became the most sought-after special guest, after-dinner speaker, author and television star in the history of aviation – bar none. He was a living legend in every sense and his international network of test-pilot and industry friends extended into the world of aviation heritage organisations, with whom he engaged fully and was never unwilling to support. His unflappable courage, which he often dismissed as mere duty, is difficult to recognise in today’s world, where the prospect of climbing for the first time into an alien enemy fighter powered by a revolutionary engine, and known to be the fastest and most dangerous aeroplane in the world, and then after a brief glimpse of a few notes, embarking on a test flight, seems unthinkable. But he did it, over and over again, until he had personally test flown and methodically evaluated every type of captured German warplane of World War Two, including the rocket-powered Me 163 Komet. And if anyone was going to try and land a jet fighter or twin-engine bomber on a short carrier deck for the first time ever, it was of course Eric. Those lucky enough to have enjoyed his company in recent years knew they were talking to history itself, a unique privilege, yet his quiet and modest manner often masked the sheer greatness of a true British super-hero.



*Eric with his companion, Jean, and the Chief Executive*

### **Farewell then Eric Brown, Test pilot Extraordinaire**

You flew more  
Types of planes than  
Anyone else ever

And you held the  
World record for  
Takeoffs and  
Landings on  
Aircraft carriers.

Now you have  
Taken off for the  
Last time and  
I hope you have a  
Happy landing.

You have  
Earned your  
Wings

*(From Private Eye, 4 March 2016)*

## POSTPONING PRIORITIES

**T**here seems to be an unfortunate trend in British politics to concentrate on the topics of the day and to put off difficult decisions on longer-term matters for as long as possible. Worse still, there appears to be very little strategic thinking on where current policies are leading, and whether new initiatives are robust enough to pass the test of time. The increasing number of U-turns underlines the widespread belief that policy decisions are not being given sufficient thought in the first place and past lessons are being forgotten or ignored. This creates an uneasy feeling that anticipating and trying to counter criticism in newspaper and tv news headlines has become the government's main priority. Thus potentially unpopular decisions are kicked into the long grass and difficult matters are subject to endless review and re-consideration. The complete lack of any urgency concerning a decision on the future of London's need for more runway capacity is just one example. This outcome comes second to how and where this might impact on elections in sensitive constituencies near Heathrow and Gatwick, even though the need for a new runway is in no doubt and extended delays are going to seriously damage the economy and the country's reputation. Civil aviation is totally global and the UK is slipping down the chart as rival airports take more and more traffic and business away from London.

Many with an interest in defence matters will be concerned that having given up our national ability to search for, locate and track submarines operating close to our coastline (for which we have special NATO responsibilities, including Oceanic Search and Rescue), the welcome U-turn on providing a Nimrod replacement is nevertheless likely to remain unfulfilled for many more years, even though three aircraft deliveries (according to MOD) are expected by the end of the decade. In this instance the problem is not obtaining the Boeing P8 Poseidon aircraft, which are being made available by diverting standard US Navy aircraft off the production line, but the fact that the hard-won, world leading, airborne ASW expertise within the Nimrod squadrons was cast aside in 2010, making the highly-skilled crews redundant and closing down all the main-base facilities for large aircraft at RAF Kinloss. This left only a token number of personnel (30) in the so-called "seedcorn" deployments with selected overseas MR units to keep ASW skills alive in the interim. Vital though this has been, training up a new generation of specialist crews in sufficient numbers to man even a small number of P-8s (only 9 are to be purchased in total) is determining how soon the UK can re-generate a credible MR force again. The decision to scrap this entire UK capability in SDSR 2010 may have solved the Treasury's medium-term defence overspend problem but the new MR replacement procurement will mean we are paying for this twice over as the £4 billion Nimrod 4 costs were written off. Co-incidentally this is the amount by which the UK Foreign Aid budget has been increased since 2010. It is quite astounding that this massive increase in funding allocation, now set in legal legislative concrete, was given political priority over safeguarding an essential

key UK and NATO defence responsibility. This unhappy episode has resulted in not just a massive loss of defence capability stretched over a decade, just as the submarine threat increases, but has also dealt a serious blow to UK prestige around the ASW world, and is a problem for which there are no easy remedies, even allowing for the "borrowing" of specialist personnel from other friendly countries and sending more crews abroad for training. And would these "borrowed" crews and instructors still be available if there was another incident in the South Atlantic? It's another case of the Law of Unintended Consequences kicking in as a result of seriously flawed political decisions.

The government's frequently repeated claim that it is fulfilling its promise to maintain the UK's defence spending at 2% of GDP, has been exposed in the latest House of Commons Defence Committee Report entitled "Shifting the Goalposts. Defence expenditure and the 2% pledge", which explains how "creative accounting" has been used to "load" the defence budget by a wide variety of means to reach a 2% figure. This sleight-of-hand includes adding such items as military and civil service pensions, overseas stabilization missions, UN peacekeeping contributions and intelligence assets. Giving evidence to the Committee, Professor Julian Lindley French said, "If one includes pre-2010 accounting methods, (defence expenditure) is due to be between 1.5% and 1.6% by 2020." He added "I suggest it is around 1.8% by 2020, which means we are indeed seeing a shifting of the goalposts". Sir Humphrey always advised hapless PM Jim Hacker to avoid transparency at all costs, so this lesson at least has been enthusiastically taken on board by HMG!

# FIRST SEA LORD'S SLESSOR I

**T**o a full audience in the House of Commons Strangers' Dining Room, the First Sea Lord and Chief of Naval Staff, Admiral Sir George Zambellas GCB DSC ADC opened his address with a tribute to Captain Eric "Winkle" Brown. This is an edited version of his speech.

(The full speech can be read on the Air League website.)

*“It is a privilege to have the opportunity to address the Air League in my final month in Command. And the timing also seems appropriate, as we reflect on the extraordinary life of Captain Eric 'Winkle' Brown. Winkle's service record reads like a cross between Biggles and Bond. His lifespan matched the seminal shift in maritime power, as the aircraft carrier eclipsed the battleship, to become the pre-eminent form of military utility and national prestige. As a test pilot in those key decades, Winkle became a pioneer of maritime air power, not least in completing successfully the first take-off and landing of a jet powered aircraft at sea. In his twilight years he remained an energetic champion of naval aviation - actually, all aviation - but it was especially fitting that he lived to see the beginnings of a British carrier renaissance, and he was genuinely thrilled that HMS Queen Elizabeth sails later this year.”*

## Future of Carrier Power

It is exactly fifty years ago that Dennis Healey's Defence Review cancelled the nation's last big deck carrier, CVA01, believing that our only future lay west of Suez, and the job could be done by long range reconnaissance and strike aircraft. Just a year after that decision, the Government then cancelled the TRS2 and, after seriously considering the F111, went for the Tornado. I could add that it is thirty-four years ago, and only two months before the invasion of the Falklands, that a Government of a different hue agreed to sell HMS Invincible to the Australians for £175 million. And it is five years since we decommissioned Ark Royal and the Navy and Air Force Harriers. So it is, with the cycle of 'strategic' judgements. And, now the latest Strategic Defence and Security Review has again settled the carrier debate, bringing two carriers into national, NATO and coalition service. As the Prime Minister said: "one carrier available, 100 per cent of the time." And now with enough jets to be credible, enough escorts to protect them, enough support ships to sustain them, and enough men and women to operate them. That ambition, and that commitment, has been set out for the next five decades, and it really couldn't be clearer. If someone tries to water that down, everyone will notice. Including those who might do us harm. The Royal Navy will be a big deck carrier Navy, and Britain will recover its strategic reach. So, we have an iconic start point on this 'reset' strategic journey.



*HMS Queen Elizabeth, the first of the two new Royal Navy Aircraft Carriers. (Crown Copyright RN photo 2015)*

But, as I will spell out - there is so much more. So much more technology to unlock, so much more authority to be had: in the small things, like the manipulation of quantum packets of data, as well as the big things like ships and aircraft, manned or unmanned. I will reflect a little on geopolitics. The newly commissioned Chinese and Indian carriers were converted from Soviet-era ships and were already twenty-five years old at the point of introduction. They spent the best part of a decade in dockyard hands. We will have built two from scratch in a similar time, with five decades of service ahead of them. Meanwhile, Russia speaks of building a new generation of large carriers. Perhaps they will, but for the moment the rhetoric is difficult to distinguish from the reality. Plenty of other navies have commissioned, or shortly will commission, smaller carriers, flat deck amphibious ships or a hybrid of the two. The French carrier Charles De Gaulle is a magnificent vessel, belonging to the very finest of navies, but she has no sister to provide continuous availability and while the US Navy's amphibious ships will typically carry only a small number of F35B jets, the larger Nimitz and Gerald Ford classes will operate a mixture of fourth and fifth generation fighters. So when commissioned, HMS Queen Elizabeth will be the first super-carrier in the world designed around, and dedicated to, a fifth generation fighter - the only real F35B carrier in the world with a sister - and this will remain the case for some years to come.

## Expectations and performance

The challenge initially comes from a combination of expectation and performance, and the associated reputational risk. It will take time, and practice, to discover the intricacies of operating what is a hugely complex machine, within an even more complicated ecosystem of people, aircraft and supporting capabilities. There will almost certainly be a very strong desire for operational capability at the soonest opportunity.

# LECTURE TO THE AIR LEAGUE

However, that capability will be progressed in stages. This is inevitable after such a long gap in carrier operations. The US Marine Corps, who have done so much already to support our own F35-B journey, will be watching particularly carefully, as will the US Navy, who have been instrumental in sustaining and developing our carrier expertise. How HMS Queen Elizabeth, Commander UK Carrier Strike Group and his team perform when sea trails begin next year will help determine the extent to which our two nations integrate F35B and carrier operations in the future. And that represents an opportunity as well as a challenge.

Once these ships have been established in service, I have every reason to believe they will be a marvellous reflection of the relationship between the Royal Air Force and the Fleet Air Arm. They will also carry helicopters from all three services and will support the Royal Marines and other forces ashore, and conduct strike and reconnaissance operations far inland. Add our unmanned expectation for the future, and we're in really interesting new territory. The reality is that operating the Queen Elizabeth-class will necessitate a new approach to the way the entire Navy is programmed and trained, as our focus moves from generating individual ships for solo deployments towards generating multiple capabilities, supported by the necessary assets in a coherent, and probably multinational, Task Group deployment. We will draw upon each of our Fighting Arms to achieve this objective and we expect them to lean into the task. They will deliver aid for DFID. They will support exports for UKTI, diplomacy for Foreign Office, security for the Cabinet Office, and they will embody UK global economic ambition on behalf of the Treasury, remembering that the third strand of the National Security Strategy is prosperity. So they offer something unique within defence: military flexibility, strategic influence, and political choice – hard and soft power bound together. Recognition of this value was evident when the Chancellor said, "We're going to make sure that when these aircraft carriers are available, and they're going to have planes that can fly from them in force. By 2023 we will be able to have 24 of these jets on the decks of these carriers and Britain, second only to the United States, will be able to project power abroad in order to defend ourselves at home." So if we get it right, then wherever in the world they go, these two ships will tip the balance of power and influence in Britain's favour.

The carriers will draw on every facet of maritime aviation, including the anti-submarine warfare and airborne early warning capabilities of the Navy's 'grey' helicopter fleet, together with the 'green' fleet of the Commando Helicopter Force. Similarly, the Royal Navy is supporting our brother and sister aviators in the RAF to restore the UK's Maritime Patrol capability; Fleet Air Arm personnel will fly with the P8 Poseidon. Together with the F35B, and in conjunction with our ships, submarines and Royal Marines, and the Royal Fleet Auxiliary, this firmly and irrevocably places the Navy as the only organisation capable of understanding, commanding and leading complex operations in the maritime environment. We are a Navy that has no intention of relinquishing our position or authority as maritime experts, or our responsibility for professionalism and moral leadership required in that domain, which is trusted by our country and highly respected around the world.



*Computer generated image of an F-35B making a rolling vertical landing on a QE class carrier (BAE Systems image)*



*The new carriers will operate a wide mix of RAF and Army aircraft, including RN types, such as this Wildcat (AgustaWestland photo)*

## Unmanned aircraft

And now to my favourite subject: Opportunity, born of the exquisite and inevitable blend of technology growth and human imagination. This is Winkle's territory. As we look further into the near future, not the distant future, maritime aviation will increasingly be shaped by remotely operated systems. The combination of Scan Eagle's ISTAR capabilities with the versatility of the Type 23 frigate is proven to be a winning partnership. But it's history. Later this year, the Navy will be hosting Exercise Unmanned Warrior, in which firms from around the world will demonstrate their highly automated and unmanned systems in a realistic tactical setting off the North West Coast of Scotland. But that's still too slow. So, how do we accelerate the opportunity? Whereas

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development of unmanned aircraft overland is in peacetime constrained by the nature of regulation relating to population density and air traffic, at sea this doesn't apply. It is much easier to exercise unmanned vehicles in the air or, for that matter, on the sea. The maritime domain represents unregulated space, which gives us the freedom to develop and to operate this technology, for our carriers, our ships and even our submarines. So, far from the maritime domain being in competition with the air domain, with a simplistic separation between the Services, quite the reverse is true: The maritime domain is intrinsic to the air domain and it has the opportunity for even greater utility and exploitation as remotely piloted systems develop.

Finally, as I mentioned it earlier, let me plant one further seed of thought. In the longer term, in my view, artificial intelligence will change the nature of warfare in all its forms. And although still in its infancy, machines eventually will have the upper hand in much of the military decision-making process although this must always be with human oversight and in the realms of kinetic engagement with human control. Will AI progress this far? It will, and its highly complex programming, its algorithms, are developing - learning - rapidly. These algorithms are not likely to be protected, or patented, because they are too easy to copy, and too common. But variations will compete in the market place, such as in the delivery of legal advice, for best performance, best accuracy and best value. Cyber might be an extra tool in the fight, because it can weaken unprotected AI or unprotected machines. But cyber protection is achievable, and will not be the dominant factor. Let me mention law in this construct. Law is made for man, and not yet made for AI machines. But it will have to be, as will AI treaties, if men and clever machines are to mix. In these circumstances, the algorithms will have to be policed. The law of warfare, 'lawfare', will need to develop to reflect AI in the unmanned world of war. However it develops, the bedrock of international humanitarian law must be maintained, critically the principles of discretion, proportionality, humanity and precaution in attack.

We know we live in a tricky world, full of uncertainties. Russia continues to probe the resolve of her neighbours. Instability across North Africa and the Middle East shows no sign of lessening. North Korea claims to have tested a hydrogen bomb and a long range missile, and increasing maritime tensions are emerging in the South China Seas. Yet our strategic decision making - however good or bad it is - always takes an age to deliver. So at this moment, Britain is rediscovering the potential of its Navy and maritime air power, and not a moment too soon. Meanwhile, technology is accelerating ahead, in the air, on the sea, sub-sea, and in space: real and cyber. Our task now is to be ready for the responsibility of the scale of the exquisite opportunity ahead."

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## ALL-CHANGE FOR THE AIR CADETS

**I**n April 2014, all gliding in the Air Cadet Organisation was halted due to concerns over the airworthiness of the Viking glider fleet and Vigilant motor-gliders, used by the Air Cadet Volunteer Gliding Squadrons. This grounding led to a comprehensive review. The outcome was the decision to retain 73 Vikings, to reduce the Vigilant fleet to 15 aircraft and introduce additional fixed-wing Air Experience flying, increasing the available Grob Tutor trainers from 45 to 70, enabling the enlargement of existing AEFs and the formation of two new AEFs. Also, the VGS would be restructured, greatly reducing the number of airfields where cadets could fly, concentrating on core "hub" sites. The Honourable Company of Air Pilots issued a statement commenting, "The new proposals have been put forward which mean a significant reduction in the number of training squadrons, airfields and gliders, and the end of the motor glider fleet by 2019. Whilst the new proposals aim to revive Air Cadet flying, they do so with a much-reduced "footprint" for the organization across the country. Travelling time to reach flying units will increase. There will also be a considerable reduction in overall airframe numbers. Lengthy lead times will also be incurred in reforming and retaining the instructor cadre, and are likely to

lead to a long-term reduction in the number of courses to solo standard. Former Air Cadets have gone on to serve in large numbers in the Royal Air Force, the Fleet Air arm and Army Air Corps. Many have also gone into civil aviation. The prospect of going solo has inspired generations of young people to be interested by the key subject areas of Science Technology Engineering and Mathematics (STEM). These subjects are critical, not only to future pilots and engineers in our armed forces and our airlines, but also to our country's long term future as we seek to rebalance our economy away from a dependence on financial and other services. If we are serious about "Winning The Global Race" and inspiring our nation's young people then it is time to look at a new funding mechanism for Air Cadet flying training aircraft that acknowledges current financial constraints in order to make these life-changing and motivational experiences as widely available as possible." It adds, "We call for a new approach, and offer to co-ordinate a new form of funding initiative between Central Government, the RAF and the UK aviation industry that could procure an additional, modern training fleet for the UK Air Cadet flight-training organization to make its benefits widely available across the country."

# THE LEADING EDGE NEWS

## *Young Aviators' Dinner APRIL 2016* Reported by Ben Filer



This was a great event once again, and for the third time was held in the atmospheric surroundings of the RAF Club in London. We were surrounded by a wealth of aviation experience, and I wouldn't want to guess the total combined number of flying hours sitting in the room on this occasion. As well as the contingent from the Air League's Leading Edge, there were representatives from British Airways, BA City Flyer, Virgin Atlantic and the Royal Air Force as well as many others, including senior figures from across the aviation and defence community.

As a gathering where students and young aviators could meet

with so many experienced aviation professionals as well as enjoying excellent food and drink, it was a very special networking opportunity that we should highly recommend in the future to all young Air League members, whether looking to become a pilot, engineer, air traffic controller or involved in other activities that are aviation and airport related.



The evening was extremely well organized, with people sitting in well thought-out arrangements where they were able to hear the guest speaker, Flt Lt Ellie Hoogewerf, talk about her experiences as a Puma helicopter

pilot flying with No 33 Squadron, based at RAF Benson. The event was held jointly with the Honourable Company of Air Pilots (HCAP) on behalf of which Tom Curtress gave the vote of thanks after dinner.



The event was the annual highlight in the Leading Edge calendar, and which helps to guarantee its long-term viability and success. Thanks are due to all those members, especially Lucie Martin, the main organizer, and Joe Audcent, who helped make it such a great evening to socialize with so many like-minded people.

## **Jack Allum, Advance Manufacturing Research Centre (AMRC) in Sheffield**

A group of us from the Air League visited the Advance Manufacturing Research Centre (AMRC) in Sheffield. The trip was very well organised and was hosted by Emily Beaston an Air League member on placement from Sheffield University. The aim of the trip was to give an overview of engineering to those that hadn't experienced it and showed the capability of engineering within the UK.

The tour began in the Design and Prototype building where Engineers built prototypes for its many partners including Boeing. Here they also attempt to increase efficiencies in the machining process, as an example they took a part that was taking Boeing 120 hours to machine and by altering the machining process were able to reduce that to 24 hours saving time and ultimately reducing costs. Within the prototype building we were shown a 5 axis machining centre, a Diamond tip machining centre, the CAT Scanner and a 3D printer. We were also shown the first UAV to be 3D printed and a video of its capabilities. Also in this building was the testing centre where materials could be tested for their yield strength and other properties. Here they had an airframe of a carbon fibre aerobatic aircraft that was on a rig undergoing 71,000 cycles at 15G to test the airframe in order to certify it to 10G. They believe this to be the first aircraft to be fully certified within the UK for more than 30 years. Finally within this room the visitors were able to try their hand at welding in a virtual reality environment to show the potential of virtual reality for training.

Following Lunch the visitors were shown around various "job shops", factories with machines similar to those in the prototype lab but much larger with the capability of machining giant parts for nuclear reactors. Following on from here we were shown the capabilities of Virtual reality, one volunteer was able to wear a 3D vision system and move a jet engine around and take parts out by hand. We were also able to view augmented reality whereby reality is overlaid by virtual reality, essentially Google glasses and we were shown many ways where this could improve the manufacturing process. Such as how gamification of work can increase the work efficiency and interact with a younger audience.

Overall the trip was very interesting and well worth a visit, enabling future pilots to understand the processes behind the machines they will fly.



*Leading Edge member Kathryn Flower after receiving the 'ATC 75 Sword' on 16 April 2016, for being the Best Female Air Cadet in the United Kingdom*

# Members News

## BA Sim Visit, 9 March 2016 Ninesh Visavadia.

When I first went on holiday with my parents I was amazed at the size of one particular aircraft. I wondered how it took to the skies. I was fascinated! This aircraft was the B747. A number of years later to get the opportunity to pilot the B747 for a first time was just fantastic! I would like to thank Andy Perkins and the team at BA for giving me this brilliant opportunity. The evening started with meeting Andy Perkins, Assistant Flight Crew Manager, and Andy Clubb, Corporate and Media Manager, before heading down to see the training facility. One of my good friends is crew for BA and she recently passed her SEP recurrent training at this facility. To actually see where she has worked hard and put so much effort in was really emotional. It was a very proud moment for me. After a tour of the facilities I was shown all of the controls of the B747 in a briefing room. I felt like a pilot! It



was great listening to Andy Perkins talking about flying. Andy just has so much enthusiasm that I just wanted to learn so much from him. After being shown the different characteristics of the B747 Flight Deck the time had arrived to “fly” the B747. I was with Chris who is a senior pilot with BA. Chris was brilliant and we worked together to complete takeoffs, landings as well as cross wind landings in different conditions. It was just amazing!

Thank you to everyone at British Airways, the Air League and to Andy Perkins for giving me this opportunity.



## Richard Gale, Bristol Ground School ATPL(A) Scholarship 2015

I'm writing to thank the Air League and my generous sponsors for my flying bursary and scholarship I obtained in 2015. A year ago I completed my night rating at Bournemouth Flying Club, which was an incredible experience to learn invaluable skills like navigating and take-off and landing at night whilst operating out of a commercial full ATC airfield.

This would not have been possible without the generous sponsorship and support from Keith Mans, which has allowed me to progress towards my goal of obtaining a commercial pilot's licence.

In 2015 I was fortunate enough to be awarded a scholarship from The Air League and Bristol Ground School to study the 14 ground exams needed to gain an ATPL (A). I am currently working through the first module subjects such as Meteorology and General Navigation. The workload is beginning to build and I find myself studying most week nights and days off as I am determined to achieve good first time passes! Once again I am thoroughly grateful to the Air League and my sponsors for the helping hand and support as I begin my journey through an exciting career in aviation. You can follow my progress through the ATPLs via my blog, which I try and update frequently when I have a break from study! It can be found at <http://inplaneview-rich.blogspot.co.uk/?m=1>

### New Members

**Air Training Corp:** 312 City of Canterbury ATC, 172 Haywards Heath ATC

**Individual Members:** Adrian Berridge, Piara Singh Bhamra, Jonathan Bradford, Anthony Cheung, Philip Crossland, Toby Freeland, Max Garland, Brandon Greenan, Henry Inigo-Jones, Martin Jermyn, Suzanna Lyell, Alasdair Mackenzie, Ross McCall, Oliver Metcalfe, Tomaz O'Donoghue, Daisy Parry, Sam Pile, Olivia Retallack, Elliot Smith, Howard Wheeldon, Oliver Willetts, George Williams

### Diary Reminders

9 July 2016 Air League Day @ Bicester Gliding Club

8-10 July 2016 RIAT, RAF Fairford

11-17 July 2016 Farnborough International Airshow 2016

18-24 July 2016 GAVA Annual aviation art exhibition, Mall Galleries, London

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.



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