



# The Air League Newsletter

Issue 6: November/December 2014

## REPRIEVE FOR TORNADO SQUADRON



(MOD/RAF Crown Copyright photo)

*ABOVE - The Tornado, in its 40th year, is still the RAF's most potent long-range attack aircraft.*

**T**he RAF's oldest fixed-wing flying unit, No II (Army Cooperation) Squadron, was unexpectedly given a one-year life extension as a Tornado GR4 squadron, following an announcement by Prime Minister David Cameron on 3 October. Previously the squadron was due to stand down next March and re-form as a Typhoon squadron and that would have left just two operational GR4 squadrons in the RAF. However, following its return from a deployment to Afghanistan, and a very brief pause back at its base at RAF Marham, aircraft were deployed to RAF Akrotiri, Cyprus, to provide an initial reconnaissance capability, later extended to include an offensive role against IS targets in Iraq. Other RAF Tornados are currently deployed to Afghanistan and Nigeria. The announcement underlines official recognition of the serious shortage of UK front-line air assets resulting from more than two decades of continuous defence cuts. The remaining Tornado GR4s are the best equipped and most capable RAF attack platforms available, with advanced reconnaissance sensors and precision air-to-surface weapons, not yet cleared for use by Typhoons.

Despite the unstable world situation, the operational RAF Tornado GR4 force was reduced from five to just three squadrons earlier this year. As outlined in this issue (See Pages 4-6) in an article by former CAS, Air Chief Marshal Sir Michael Graydon, the UK's combat air fleet has fallen to its smallest size ever. Significantly, since the 2010 SDSR, it has been shrinking a lot faster than replacement squadrons are being regenerated. The RAF is set to see yet more reductions in air power strength when the remaining Tornados retire in 2018-19, unless enhanced multi-role capabilities are rolled out sooner into the Typhoons. Even this fleet is due to be reduced by 50+ aircraft if the

Tranche 1 fighters are withdrawn as currently planned, rather than being upgraded. In contrast, France is upgrading all its early Rafale fighters to the latest F3 standard. RAF attack and carrier strike capability is much reliant on the successful introduction of the F-35B from 2018, as a Harrier/Tornado replacement, yet to date no UK production orders have been placed beyond an initial training and evaluation trio of aircraft. Many question marks hang over reliability issues and delays which are restricting the initial in-service capabilities and logistic support of US F-35s, so extending the service life of the RAF GR4s has become essential - and might need to go even further.

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# INDUSTRY NEWS



*LEFT - The new Rolls-Royce Advance and UltraFan composite/titanium fan blade has taken to the skies for the first time, incorporated into a Trent 1000 “donor” engine aboard a Rolls-Royce Boeing 747 test-bed aircraft at Tucson, Arizona. The Advance engine design will offer at least 20% less fuel burn and CO2 emissions than the first generation Trent engines and could be ready for service in 2020. The UltraFan is a geared design with a variable pitch fan system based on technology that could be ready for service in 2025 and will offer at least 25% less fuel and CO2 emissions against the same baseline. The CTi technology delivers lighter fan blades while retaining aerodynamic performance. Combined with a composite engine casing, it forms a system that reduces weight by up to 1,500lbs per aircraft, the equivalent of carrying seven more passengers at no cost. (Rolls-Royce photo)*

**A number of highly skilled technology jobs have been protected across the country in a £40 million contract to support a Royal Air Force air-to-air missile system.** The contract with MBDA, which designed and manufactured the Advanced Short-Range Air-to-Air Missile (ASRAAM), will provide support infrastructure and maintenance for the weapon for the next five years. The deal will sustain multiple positions at the company’s factories in Stevenage, Hertfordshire, Greater Manchester and Bedfordshire and will ensure the effectiveness of these highly agile air-to-air missiles which equip the UK’s Air Quick Reaction Alert aircraft, who are responsible for protecting UK airspace as well as on operations in the Gulf and Libya. Minister for Defence Equipment, Support and Technology Philip Dunne MP said: “This contract is more positive news for MBDA and the United Kingdom’s Complex Weapons sector. It will sustain a number of highly skilled jobs and is another example of the Ministry of Defence’s continuing commitment to British technology.

**Boeing and Virgin Atlantic Airways recently celebrated the delivery of the airline’s first 787-9 Dreamliner.** The airline is the first European airline to take delivery of the 787-9 and plans to operate the airplane initially on its London Heathrow to Boston route. Virgin Atlantic’s first 787-9 touched down at London’s Gatwick Airport following a more than 7,400 kilometer (4,000 nautical mile) nonstop flight from Paine Field in Everett, Wash. The airplane, named ‘Birthday Girl’ in reference to the UK carrier’s 30th anniversary, is the first of 16 787-9s Virgin Atlantic has ordered from Boeing. “The first 787-9 in Europe will be a flagship for Virgin Atlantic’s fleet, providing greatly improved efficiencies across its routes,” said Todd Nelp, vice president of European Sales, Boeing Commercial Airplanes. “The airplane, with its unique onboard features, will provide an unrivaled passenger experience, cementing Virgin Atlantic’s reputation as a true innovator in air travel.” The 787-9 complements and extends the 787 family. With the fuselage stretched by 20 feet (6 meters) over the 787-8, the 787-9 will fly up to 40 more passengers an additional 830 kilometers (450 nautical miles) with the same exceptional environmental performance – 20 percent less fuel use and 20 percent fewer emissions than the

airplanes they replace. The aeroplane leverages the design of the 787-8, offering features such as large windows, large stowage bins, modern LED lighting, higher humidity, a lower cabin altitude, cleaner air and a smoother ride. Based out of London’s Gatwick and Heathrow Airports, as well as Manchester and Glasgow Airports, Virgin Atlantic Airways operates a fleet of approximately 40 aircraft. Along with its first 787-9, the British operator also has a Boeing fleet of 12 747-400s operating on routes across North America, the Caribbean, Africa and Asia. To date, nearly 60 customers from around the world have ordered more than 1,000 Dreamliners, approximately 40 percent of which are 787-9s.

**The continued market demand for Airbus jetliners was underscored by the 76 orders logged during September** for its A320ceo (current engine option) and A320neo (new engine option) families, along with the A330ceo, while the company maintained its 2014 delivery pace with 54 aircraft provided to international customers. Leading the month’s single-aisle bookings was easyJet’s order for 27 additional current engine option A320s, taking this carrier’s combined total order for the type to 315 aircraft – and continuing it as an all-Airbus operator. SWISS, which is a member-airline of the Lufthansa Group, will expand its fleet with 10 A320neo and 5 A321neo jetliners, with these fuel-efficient aircraft gradually renewing and replacing SWISS’ existing fleet of A320 Family aircraft. In another September booking, Lufthansa approved the purchase of 10 A320ceo aircraft for its Eurowings subsidiary. These jetliners are to become the backbone of the new low cost business model announced by the Lufthansa Group in July 2014, which foresees Eurowings operations on direct connections within Europe. Completing the month’s single-aisle transactions were eight Qatar Airways Group A320ceo aircraft, along with four A319ceo jetliners for Z/C Aviation Partners. For Airbus’ widebody A330 product line, the September results included International Airlines Group’s decision to convert eight previously-announced A330-200 options into firm orders for Spanish flag carrier Iberia, which will become a new operator of this version. Iberia’s all-Airbus fleet already includes eight A330-300s, and its new -200s will be delivered

*continues on page 6*

## THE NUMBERS GAME

**I**t isn't just the declining numbers of military aircraft in service that are a cause for concern in the aviation world. Numbers currently figure very much right across the whole spectrum of aerospace – and at both extremes. With declining numbers of military aircraft in service it becomes more difficult to sustain key components in the infrastructure that has given the Services their operational edge in the past- the difference between winning and losing. This has been seen over and over again when unexpected events have demanded an immediate operational response, and somehow the Services have managed to deliver, against all the odds. This was last seen on an epic scale during the two Gulf Wars, and the Falklands War. Behind the scenes the military, and industry, worked 24/7 to assemble a fighting machine that was capable of achieving what was demanded. In the case of the Falklands, as in 1940, Britain was alone and had to go to war with what it could gather together in just a few days. That achievement was quite remarkable, bringing forward new capabilities in days rather than years, and forming new squadrons of aircraft almost overnight. It was only possible then because there was a massive Cold War stockpile of weapons and logistics facilities that have long since been closed down or transferred to the private sector. There were also plenty of skilled personnel who could be taken away from their desk jobs and immediately given an operational role again. In other words, there were sufficient “surge” reserves of people and machines to enable significant tasks to be undertaken maximizing the experience of skilled in-house specialists. Large maintenance and repair facilities could work around the clock to modify and prepare stored aircraft, ships and vehicles because they had been retained for just such emergencies. But the situation is very changed today. The three UK services are only a third of the size they were when the first Gulf War emerged and a quarter of the size they were during the Falklands War. Successive force reductions have reduced reserve assets to near zero, with hardly enough in the front line to carry out more than token operations in conjunction with allies. And with a default procurement policy of buying aircraft off-the-shelf from abroad, there is decreasing scope for long term careers designing, upgrading and sustaining new programmes. Thus declining military numbers have created a downward spiral in industrial capabilities and career prospects across a broad band of aerospace activities.

The saving factors in the UK's resilient aerospace sector result from the huge success of commercial aviation, the fast growing space sector and the high level of advanced innovation in new technologies, which have a global application. In the commercial sector, the biggest numbers-related problem is the need for more highly-skilled, highly qualified technical entrants. Boeing and Airbus both agree that there will be a need for around 35,000 new large aircraft over the next twenty years to act as replacements and to deal with traffic growth. The business jet market anticipates another 31,000 new aircraft and the regional market will need up to 30,000 new jets and turboprops. So where are all the skilled personnel coming from who can assemble these aircraft, fly and maintain them? Increased automation will reduce the head-count in factories, but in the USA alone, the average age of skilled

aerospace workers is 50+, and a replacement worry may soon become a crisis, especially with Boeing increasing production of 737s to over 50 each month! This is a problem faced across the world and the lack of suitable new generation engineers may soon have an impact on production across the supply chain. The scarcity is no doubt due partly to the rigorous nature of technical training compared to many other, better paid, careers. Perhaps an obvious answer is to pay more. It has long been the tradition in the industry for management personnel to be very well rewarded while technical personnel often receive less, despite years of challenging preparation for qualification. Certainly there is going to be plenty of opportunity for future generations working in this exciting sector, but how to attract enough of them into engineering to satisfy demand should be a national priority.

By Air Chief Marshal Sir Michael Graydon, former C

**The UK's latest involvement in Iraq, *Operation Shader* as it is known, attracted media interest from the start but nothing like as much as when the operation moved from reconnaissance to offensive combat missions. Both tasks were provided by the Tornado GR4, with 6 being deployed to RAF Akrotiri in Cyprus. Rivet Joint, a Boeing 707 airframe which replaced the RAF's Nimrod R1, now provides crucial intelligence gathering, and the Voyager Air to Air Refuelling aircraft has been providing the sort of reliability and fuel off-load long hoped for.**

With the rebuff over the vote whether to employ Air Power in Syria still very much to the fore, the Prime Minister sought and gained Parliamentary authority for the transition to offensive combat missions. Media interest in this debate was high, but attention quickly shifted once the decision had been made to the British Tornados and their effectiveness. We saw the inevitable commentary on the utility of Air Power, on aircraft returning from missions with weapons undelivered, on the need for ground forces, speculation on how long the conflict would last, the exit strategy, sustainability and so on. All of this was to be expected and most of it required a repeat of answers given on previous conflicts.

On seek and destroy missions, returning with weapons undelivered is quite normal and a tribute to the discipline of the crews who will have gathered much useful intelligence for future sorties. Of course, to take and hold ground, ground forces are needed but for Iraq these should be provided by local nations, particularly Iraqi and Kurdish Peshmerga forces supported, hopefully, by advisors from coalition allies. With ISIS demonstrably capable of taking whole cities, evicting them will clearly take quite some time as the PM had said, so a prolonged campaign over years is to be expected. Significantly, one advantage of the use of Air Power in such circumstances is that the exit strategy is a great deal simpler than for UK Ground forces, who

sadly all too often become the problem rather than the solution.

Many commentators questioned the scale of our commitment. As Ken Clarke, the ex-Chancellor intimated this was a mere token. But was this really all we could provide? And then the penny dropped. With only 3 Sqns of Tornados, and with these already tasked for Afghanistan and Nigeria, things were going to be tight. Worse still one of these was destined to stand down in the early New Year. The remaining two squadrons were all that the UK, a long-time member of the Security Council, a leading member of NATO, and a nation that liked to play an important role on the world stage, could muster to contribute a full combat role to Iraq. How could this be? Surely there are more than 3 Sqns of Combat Air?

What of the Typhoons? True, there are 4 Typhoon Sqns; but two of these are optimised for Air Defence and the other two, whilst capable of delivering the Paveway LGB, have no clearances for the Raptor Reconnaissance pod, for Storm Shadow (the bunker busting missile), nor for Brimstone the weapon of choice for mobile targets. Only Tornado is cleared for all these, and the transition for Typhoon clearance is beset with money problems and the difficulties of 4 nation agreement. So, yes, we do indeed have only 3 Sqns suitable for this operation. Was this envisaged? Sadly it was, and the risks were taken



ABOVE - The continuing delay in placing production orders for the UK's F-35Bs risks having new aircraft carriers with no aircraft and an RAF attack capability gap as the remaining Tornados are withdrawn. (LM photo)

## COMES HOME

### Chief of the Air Staff and Air League Council Member

in the hope they could be managed, and against the advice of the military experts who pointed to the increasing instability across the globe.

In SDSR 10 a requirement for 12 Combat Air Sqns had been identified (compare this to the 30 squadrons which were available for Gulf War I). The inherited financial deficit required this to be further drawn down to 9 with risks to be accepted and support reduced to just one brigade level stabilisation operation. A nation of a projected 70m people, spending so we were then constantly told, the 4th largest amount of money in the world on defence, could support only one brigade level op with fewer than 30 aircraft for sustained operations.

In September 2010, the then S of S, again against all advice, dictated that 7 Sqns were to be the Future Force 2020 level; moreover Tornado OSD was to be brought forward from 2025 to 2019.



*ABOVE - Three MBDA Brimstone precision missiles seen beneath the wing of a Typhoon at Farnborough International, yet this weapon is not yet cleared for use on the RAF's Typhoons. (Editor's photo)*

#### **The facts were stark:**

- 7 Sqns of Combat Air total
  - 5 of them capable of offensive operations
  - 3 only capable of delivering the full spectrum of weapons for effective offensive operations
  - Of those 3, one planned to be stood down in early 2015
- By 2018, the introduction of maybe just one squadron of F-35s with an Initial Operating Capability - which means in practice, limited weapon clearance. And this introduction will see shortly afterwards the 2 remaining Tornado Sqns disbanded. A probable total then of 6 Sqns with no certainty of the numbers that will be capable of delivering the weapons that Tornado currently can.
- 6 Sqns, rising perhaps to 7 by 2020, to police and defend the UK airspace, that of the Falkland Islands, to provide NATO support against crises such as Ukraine. Iraq could well still be running, and the Middle East likely still in chaos, and all in a world of increasing danger as so well described by William Hague even before ISIS and Ukraine.

To his great credit, the new S of S, Michael Fallon, has now increased the number of Tornados in theatre to 8, and saved No II(AC) Tornado Sqn from disbandment and we must see if this dose of common sense extends beyond the next election. But the portents are ominous.



*ABOVE - Tornado as seen from a Voyager A330 air tanker en route to Cyprus. (MOD/RAF Crown Copyright)*

Somewhat cynically, and with their eyes fixed on the 2015 election, all political parties appear to be engaged in the great give away to the NHS which already consumes over three times the figure devoted to defence. Despite their responsible words that defence is the first duty of Government, a point hammered home by the PM and both the Foreign and Defence Secretaries at the Conservative Party Conference, and also emphasised by Mr Cameron during the NATO summit in Wales, it seems their fine words have a hollow ring. The NHS will be ring fenced along with Overseas Aid, and Education. So where then is the money to meet the "2% of GDP" exhorted by the PM to his NATO colleagues? Indeed, all indications are that the UK will actually be spending only around 1.8% GDP on defence within the next year or so, and as little as 1.6% by 2020.

In the meantime, the RAF will, as it always does, carry out the mission with skill and discipline; but

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sustaining the operation will not be easy. Crews will have to be retained who were bound for other tasks; and many have already been on operations for years on end. They deserve a break but who will replace them? There are some tricky training and career, not to forget morale, aspects to this sustained campaign.

As has been evident for some time, and highlighted by the UKNDA in all its papers, the underlying problem remains; the RAF and indeed the Royal Navy are now at a manpower and equipment level which is ill matched to the demands made on them. The slashing of front lines by successive Governments in a time when the world is so troubled and the risks so high is a gamble already shown to be dangerous, and could before long result in a catastrophe.

Generally our equipment is good and at the hi-tech end of the spectrum. But numbers matter and we simply cannot rely on any technology edge we might have today to offset an increasing numerical weakness of the future. We delude ourselves if we truly believe that we spend the 4th largest amount on defence and that this buys us the 4th most sizeable and capable armed forces. This delusion has been confirmed by all reputable sources, and we need to wake up to the fact that we have not done so for several years. More importantly, we do not get the output from our spend which peer nations seem to do judging by the numbers of Sqns and Surface combatants

#### **Industry News** *continued from page 2*

from the end of 2015. Also reflected in the month's new business was the transaction with Air Algérie for three A330-200s, to be deployed as part of the carrier's continued growth plans. Completing the activity was an ACJ330-200 corporate jet order for a private customer. Taking cancellations into account, Airbus' net orders for 2014 were 791 aircraft at the end of September. The month's deliveries involved 42 A320 Family jetliners, eight A330s and four A380s. This included the first A320 provided for Vistara Airlines – a promising Indian start-up carrier – which was delivered via lessor BOC Aviation. Also during September, seven A320 family aircraft were provided for U.S.-based American Airlines. Taking into account the September orders and deliveries activity, Airbus completed the month with a backlog of 5,907 aircraft – another industry record.

**Recent announcements from UK-based Monarch Airlines** that it intends to restructure its operations to emerge reinvented as a leading scheduled low cost European airline, have resulted in a consequential reduction in its current number of pilots. Six of the pilots affected are experienced co-pilots on the Airbus A320 holding an unrestricted Multi-crew Pilot Licence (MPL) obtained through CTC WINGS training with UK-based CTC Aviation. A further 6 trainee Monarch Airlines pilots were part-way through training for the issue of an MPL, also with CTC Aviation. Upon announcement of these reductions in pilot numbers, the CTC Aviation and Monarch Airlines management teams immediately worked proactively together to try and resolve the situation for the affected pilots and have demonstrated the inherent flexibility and transferability of the new



*ABOVE - The latest Boeing Chinook Mk 6 helicopters will compensate the RAF for the transfer to the Royal Navy of the Merlin Mk 4s (Editor's photo)*

they can field. Defence sustains jobs in UK which is understandable, but when equipment could be bought cheaper abroad, the extra cost should fall under the Trade and Industry banner. Moreover, the cost to Defence of decisions delayed for political reasons is conveniently forgotten. Let us remind ourselves, while the parties debate endlessly whether to commit 2% or 1.8% to Defence, that this, in reality, means that 98% of all GDP is not spent on Defence.

**We can hope that the chickens never come home to roost! Operation Shader has, however, highlighted the risks we are clearly running and just how bare the larder really is; our superb armed forces who deliver time and time again deserve a lot better.**

MPL; thus dispelling industry concerns about the transferability of the MPL between airlines. For the pilots still undergoing training, CTC Aviation approached another CTC Partner airline - easyJet - to determine whether the airline would be willing to accept the trainees onto an easyJet sponsored CTC WINGS MPL airline pilot career programme. Within a few days, all six trainee pilots had passed the easyJet selection process and they have already recommenced their MPL training under the easyJet brand; all within 1 month of the initial Monarch Airlines announcement. The MPL airline transfer process was also agreed and supported expeditiously by the UK CAA given that both airlines are sponsoring A320 MPL programmes. In addition, six experienced MPL licenced First Officers currently flying with Monarch Airlines, have undergone a similar process of support and collaboration between CTC Aviation and CTC Partner airlines flybe and BA to help find new flying opportunities. These pilots will either have to complete an 'Operator Conversion Course' (OCC) if they are remaining on the same aircraft type, or a further type rating course if they are changing aircraft type. Success of the MPL is based upon the training provider, the airline sponsor and the regulator working together in genuine partnership. These recent events admirably illustrate 'proof of concept'; even under the unfortunate circumstances of an airline reducing MPL licensed pilot numbers. CTC Aviation works with a number of CTC Partner airlines around the world to deliver both MPL and ATPL airline pilot career programmes. The company employs a dedicated Graduate Placement Team working on behalf of its pilots to facilitate placement as a First Officer and maintains a 98% graduate employment record.

# THE AIR LEAGUE

Keeping Britain at the Forefront of Aviation



The Air League Trust is offering the following opportunities in aviation and aerospace to young men and women permanently resident in the UK. The competition for flying scholarships opens on-line in November 2014 and all other competitions on 1 December 2014.



## Fly helicopters?

Bristow flying scholarships offer four UK nationals the chance to gain an NPPL (A) before learning to fly helicopters in Florida. Those who progress satisfactorily will be offered a career in Bristow.

*Applicants must be 18 but under 26 on 1 April 2015. Closing date Friday 30 January 2015*



## Fly solo in 10 days?

Flying scholarships offer the chance to learn to fly through the award of 12 flying hours in light aeroplanes towards the achievement of a National Private Pilot's Licence or completion of a PPL(A). The majority of scholarships will be flown on a residential basis at selected UK flying schools.

*Applicants must be 18 but under 26 on 1 April 2015.*

**Closing date Friday 30 January 2015**

## Experience aerospace engineering?

Engineering scholarships provide placements in the UK aerospace industry for one or two weeks for young people considering careers as aerospace engineers. The scholarship covers all reasonable travel and accommodation costs.

*Applicants must be 18 but under 26 on 1 April 2015. Closing date Friday 20 February 2015*

## Improve your gliding skills?

Gliding scholarships offer solo gilder pilots awards of up to £300 to gain flying experience and new qualifications.

*Applicants must be 16 but under 26 on 1 April 2015.*

**Closing date Friday 20 February 2015**



## Improve your licences?

Flying bursaries provide 3-5 hours advanced flying training in single-engine piston aeroplanes, to assist licensed pilots gain additional flying qualifications or to renew a rating. *There are no age limits.*

**Closing date Friday 20 February 2015**

Please visit [www.airleague.co.uk](http://www.airleague.co.uk) for further details. To download application forms for all competitions and to join **The Air League online**

e: [scholarships@airleague.co.uk](mailto:scholarships@airleague.co.uk) t: (020) 7222-8463  
Broadway House, Tothill Street, London SW1H 9NS



# MEMBERS' NEWS

**Thomas Hornsby (BAe Systems Apprentice), Swire Charitable Trust 2014**, I've just finished my flying course. I managed to complete my Solo Cross-country Qualifier from Dundee to Fife to Cumbernauld, returning back to Dundee, an experience I will never forget.

During my overhead join at Fife I was told to hold at the end of the downwind to allow for parachutists to do their decent back on the airfield, I've never seen a skydive from the air before and it was a terrific display, once they had landed and cleared the runway I was able to make a uneventful landing which is exactly what I wanted.

With a quick signature I was back in the air and on my journey now routing along the Firth of Forth flying overhead Edinburgh's Forth bridge and taking a look at BAE's new project HMS Prince of Wales at Rosyth, a view that very few

of my colleagues would ever be able to see.

As I followed the estuary I drew closer to Cumbernauld where I had not landed before. After another overhead join I approached the runway with what I thought was a nice set up but resulted in what would have been a touch down almost halfway down the strip, so after a go around I extended my final and allowed myself for what I must say was far better approach and landing. Another quick stop and then I began my final few legs back to Dundee.

Navigation over to Dunkeld and Blairgowrie was delightful. A steady 100kts at 2300RPM allowed me to take in the beautiful Scottish country which surrounded me. In no time I was overhead the disused Edzell airfield and my final landing back at Tayside meant I had completed my flight and the QXC was a great success.

All of this would not have been possible with the help of the Air League Trust. Both interviews I've had with you went well and your decisions had sculptured the beginning of my career in aviation. So from the bottom of my heart I thank you for the opportunity you've given me on more than one occasion.

My target is to complete my PPL this year and hope to see you at the annual reception with my licence in hand.

**James Eveleigh, ALT(Aerobatics) Gliding Scholarship 2014**, I would like to thank you and everybody else at the Air League for providing me with a fantastic opportunity this summer. You have all been fantastic in the efficient matter you have handled everything.

I joined Cambridge gliding Centre at the start of the week full of expectation and anticipation. I had gained an Air League Scholarship to learn to do aerobatics but I also wanted to complete my Bronze badge. I had a brilliant time learning how to aerotow, spin and fly aerobatics with Martin Whitehead. The following day I did a 300km with Andy Beatty! In the 4 days I spent there I learnt how to spin, completed my first aerotow, attained my Standard Aerobatics badge and my Bronze badge. I will be back to complete my cross country endorsement soon. I would like to thank everybody there for helping me to have a fantastic week, especially Martin and Andy for flying with me. I would also like to thank the Air League for awarding me the scholarship and to Christopher Walkinshaw of Marshall of Cambridge for sponsoring the scholarship, which allowed me the opportunity to greatly advance my flying skills and to gain a valuable insight into aerobatic and cross country flying.



ABOVE - The Battle of Britain Flight's familiar Avro Lancaster was joined this summer by the airworthy example from the Canadian Warplane Heritage Museum, seen here, which provided a series of memorable display appearances all over the country. (Doug Fisher photo)

## New Members

**Corporate Members:** 1140 Steyning ATC

**Individual Members:** Alex Bartlam, Ryan Buchanan, Mark Burrell, Jonathan Courtney, Liam Davies, Julie Gibson, Rasheed Graham, Frederick Kemp, Jonathan Land, Haley Martin, Grant Nixon, Stephanie Nock, Shill Patel, Owen Petford, Joshua Shriver, Alex Sharples, Christopher Sheyindemi, Matthew Soar, Robbie Somers, Benedict Stephens-Simonazzi, David Timson, Abigail Wilkinson

## Diary Reminders

26 November: Andrew Humphrey Memorial Lecture

3 December: Council meeting

8-9 December: Leading Edge visit to RAF Coningsby

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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