



The Air League Newsletter

Issue 3: May/June 2013

AEROSPACE INVESTMENT BOOST

The government is to invest £1 billion, to be matched by a similar amount from industry, to help ensure that the UK-based aerospace manufacturing sector can remain competitive as next-generation aircraft programmes are prepared over the coming decade. This boost to Research and Development funding is aimed at bringing forward suitable innovation in materials, structures and manufacturing methodologies that will have application as new aircraft emerge to replace legacy designs. Many of these will soon be entering their twilight years, having provided the basis for several decades of production activity and revenue generation. With the domestic defence market, once a bedrock of home production, now in deep decline, the UK aerospace sector will struggle to retain its share of civil sales in years to come unless it can offer world-leading technology – so this new funding infusion is welcome news.

Some twenty years after dismantling a world-class, state-funded, aerospace research and development organisation in favour of a largely programme-driven industry finance stream, the UK government has finally concluded, after much industry lobbying, that long-term survival, let alone re-generation, cannot be left entirely to the short-term tidal flow investment opportunities of the free market. A more structured approach to growing and sustaining R&D capability in emerging, as well as established, areas of advanced technology has long been recognised in most of the world's leading aerospace nations, so the support of the UK Coalition government for a more proactive R&D policy has been widely supported by industry. The new money will be allocated over an initial seven-year period and will focus on technologies that might create breakthrough gains for the future as well as considering skills and training needs, especially within SME companies. Merely continuing to encourage SMEs to win work packages as contractors, rather than as design partners, will not safeguard their future prospects as they will have to offer clear added value, and better solutions, if they are to beat new foreign competitors who are investing £billions to expand

their own industries. A new Aerospace Technology Institute will act as a virtual R&D powerhouse to co-ordinate new projects so there will be less risk of duplication of effort and more opportunities to cross-feed knowledge within the aerospace sector. An earlier government creation, the Aerospace Growth Partnership, is concentrating much initial effort on putting together another virtual institute to enhance aerodynamic design research, in the form of the UK Centre for Aerodynamics. Together, these new initiatives, backed by significant amounts of investment, signify a positive step in the right direction towards safeguarding Britain's aerospace manufacturing future.



ABOVE - Automated assembly jig at GKN's new Bristol manufacturing facility for A350XWB composite inner wing spar production. (Editor's photo).

In this issue...

More Heathrow runway options P2 • Aeronautica P3 • Industry News P4-5
Everest Flight Anniversary P6 • Leading Edge news P7 • Members' News and Diary events P8

Heathrow - More Runway Ideas

Decision-taking with regard to finding a solution to London's future runway capacity might have been kicked into the political long grass beyond the next General Election, but this has not discouraged continuing high-level debate on the matter – quite the reverse. It might be recalled that the prospect of a three runway airport at Heathrow (agreed by the previous Labour Administration and then cancelled within 24 hours by the Coalition Government) was widely predicted in the media to be heading towards a policy U-turn following the replacement of the two Transport Ministers most closely involved (and who had constituencies under the flight-path). This did not come to pass, however, and instead an official “look and see” airports policy entered a consultation phase under a new Airports Commission, Chaired by Sir Howard Davies, who was briefed to go back to square one and consider all options. While the most high profile lobbying has centred on the proposals for all-new four-runway airports to the East of London vs. more runways at Gatwick and Stansted to ease the pressure on Heathrow, and the original plan for an additional (third) runway at Heathrow, March 2013 saw reports emerge of yet more proposals, but this time suggesting four-runway options for Heathrow. Both *The Economist* (March 30) and *The Financial Times* (March 11) reported on different, but similar, schemes that claimed to offer an optimised compromise solution.

In January this year, the Department for Transport published revised (downward) estimates for the traffic growth figures out to 2030 and 2050. Following the general reduction in business activity following the financial crisis the DfT now predicts that by 2030 passenger demand at UK airports will total 320 million rather than its previous estimate of 495 million. And it now predicts that the total will only be 480 million by 2050. This seems a huge fall in what was expected, and these figures should perhaps be regarded as somewhat suspect as the historic 40 year annual growth rate has been a steady 5% even allowing for many severe economic dips and surges. Even if these depressed estimates turn out to be accurate, there will still remain a growing gap in runway demand and supply, so a robust solution will require a significant capacity increase that also meets environmental concerns and the sheer practicalities that go alongside building new communications links and supporting infrastructure.

Three of the biggest arguments against the East of London off-shore proposals are that they would probably cost between £50 billion and £70 bn, would take 30 years to become fully functional and 75% of their natural catchment area would be underwater! To be forced to use east/west-only directional transport links would greatly add to most users' total travel time and airport-related workers (currently over 110,000 directly serving Heathrow, with twice as many in indirect employment) would have to face unacceptably long and difficult journey times to work unless they decided to uproot themselves and move to new urban areas in the marsh-lands East of London! The case for building four new runways just to the West of Heathrow is not as far-fetched as it might seem. The arguments in favour include fully exploiting the 360 degree catchment area,

which includes the economic business parks that have located themselves close by, because of the convenience of Heathrow, and existing rail and motorway links. In one of the new proposals, four completely new runways would be built immediately to the west of the existing airport, linking to existing taxiways and terminals and their rail terminals. The noise contours would move west away from the most densely populated urban surroundings in West London, reducing total noise disruption, though inconveniencing new, less densely populated areas to the West. Air traffic patterns would not need any radical changes. An existing reservoir would need to be replaced and the M-25 decked over, but such costs would be but a fraction of those required for a “Boris Island” type solution. The alternative four-runway Heathrow proposal would add two new runways in line with the existing ones, but to the West. Existing terminal infrastructure could be retained and expanded. Extended rail links to the South, West and North could absorb much more passenger traffic to and from Heathrow without encouraging passengers to arrive via the London direction as today. Heathrow's existing infrastructure is massive and any scheme that can fully utilise what is already there must be worth serious consideration. An all-new East of London hub might be unaffordable in any event, but the business case for it only stacks up if Heathrow is forcibly closed down, which would devastate businesses in the Home Counties west of London. Nobody has yet explained how that might be done in a competitive airport environment. The economic and employment repercussions could be political suicide. London is not Hong Kong! An advantage of the recent proposals for four runway Heathrow airports is that extra runways could be added in stages as traffic requires. No doubt the debate will continue... but hopefully not indefinitely!

TYPHOON & LIGHTNING II FULFILLING THE PROMISE?

In the shape of the Eurofighter Typhoon and Lockheed Martin Lightning II, alias Joint Strike Fighter F-35B, the UK will, before the end of this decade, operate two of the world's most versatile and effective modern combat aircraft. The Typhoon is a fourth generation multi-role fighter design, the Lightning II a fifth generation advanced air systems platform. Both date back to the 1980s in concept, but such is the length of the modern aerospace development cycle the end result, incorporating changed military requirements and technologies, is in many ways a far cry from what was originally intended when these two programmes were launched. Progress in delivering enhanced capabilities through advanced digital sensors and systems, and new weapons, should transform what can be achieved with these new aircraft compared to what went before. What should cause increasing concern however is the degree to which ever declining numbers is undermining what might be expected in air power projection from tomorrow's limited number of operational fast jet squadrons.

The Typhoon resulted from an RAF requirement for a Light Combat Aircraft that might also become the basis for a new joint European Fighter Aircraft (EFA). The UK funded Experimental Aircraft Project (EAP) of 1986 provided a sound technological basis for a firm European EFA programme, despite a shaky political start, with Germany trying to first shrink the aircraft and then pull out altogether, and France going its own way with the Rafale. Nevertheless, the revised consortium held together with a 1994 first flight for the EFA prototype. Though ear-marked in the 1980s to replace RAF Phantoms and Jaguars, it became clear that the new fighter, later to be named Typhoon, would be a superior, highly agile, fly-by-wire air combat aircraft to also eventually replace the Tornado F2/3s that were not regarded as fully comparable with the best US and Russian air defence fighters. The RAF share of the total EFA requirement was stated to be for 232 aircraft. Now the planned fleet number is believed to have been reduced to less than 130.

The X-35 was the winner of the US Joint Strike Fighter fly-off competition between Lockheed Martin and Boeing and the MOD announced in January 2001 that the UK would join the JSF programme (known as the Future Combat Aircraft in the UK) to fulfil the requirement for 150 advanced STOVL aircraft to replace both the RN Sea Harriers and RAF Harriers. The development of the F-35 family has been extremely protracted, with a steady rise in programme costs, but if all goes well, the UK will receive a very sophisticated stealthy, supersonic aircraft that will be able to act as an all-seeing sensor platform that can search for, identify, track and attack multiple targets in the air and on the surface with high levels of pilot situational awareness and connectivity. It will carry an impressive electronic self-defence suite, able to jam and mislead attacking foes, and also be able to operate in covert mode. And it will restore the lost Harrier/Sea Harrier STOVL capability. This performance comes at a very high cost however. Although the MOD will not comment on the unit cost for British F-35Bs, Australia and Canada, as well as some European customers, have asked to revisit acquisition and sustainment costs and Japan is understood to be paying around \$100 million for each F-35A aircraft, which is cheaper than the B model. Even if this figure is higher than what the MOD will

be paying as a programme partner, this ball-park cost makes it a rather valuable air asset to use for the sort of bomb-truck tasks that were routine and so effective in the Joint Force Harrier and Jaguar communities. The UK has been a Tier One industrial partner in the JSF since 2001, contributing an initial £2 billion to engineering, development and industrialisation at an early stage, apart from acquisition, so if the 48 production aircraft stated to be destined for joint RAF/RN use remain the only F-35s in service (apart from three development and evaluation aircraft now flying) then the unit cost may turn out to be astronomical. That said, the UK will receive 100% of the aircraft's capability for just 8% of the US share of investment, so in those terms the MOD believes it is getting a very good deal. But will 48 aircraft be anything like enough to allow for training and exercises ashore and afloat, as well as on operational deployments and extended carrier air group commitments? The RN insisted on building two new Queen Elizabeth Class aircraft carriers big enough to take 60 aircraft, or more likely 40 in peacetime. Now it looks as if only half a dozen F-35Bs will go to sea at once on a regular basis – no more than on the Invincible class Harrier carriers which it regarded as too small. There would appear to be little provision in the planned orders for accidental or combat losses. If the Italian and Spanish navies can operate up to 15 STOVL combat aircraft from each of their mini-carriers, a third of the size of the new 65,000 ton RN ships, then the case for these massively expensive super-carriers now looks weak, especially as they will not have catapults or arrestor wires for cross operations with other naval fixed wing aircraft following two configuration U-turns!

The Typhoon is due to acquire new AESA radar, an upgraded avionics system and new weapons (Storm Shadow and Meteor) before 2020, yet all this was due to be in service by now, had a stream of defence funding cuts not put everything back several years. The Typhoons and F-35s are now expected to also replace the Tornado GR4 fleet of 130 aircraft by 2020. If this combined but reduced Typhoon/F-35 fast jet fleet is all that will replace around 470 Harriers, Sea Harriers, Jaguars and Tornado F3s and GR4s, then a very drastic reduction in real, deployable UK air power is inevitable at the end of this decade, even if the individual new fast jets are world-class.

1ST FLIGHT OF NEWEST UK CHINOOK HELICOPTER

Boeing recently completed the first flight of the newest CH-47 Chinook heavy-lift helicopter for the Royal Air Force. The March 15 flight, at the Boeing helicopter facility near Philadelphia, happened ahead of schedule and confirmed initial airworthiness for the HC Mk 6 Chinook.

"This is a truly impressive achievement for both Boeing and the project team," said Capt. David Childs, Chinook Team Leader, UK Defence Equipment & Support. "To see the first aircraft fly less than 20 months after contract signature is a source of great pride for all those involved in this key project." The Mk 6

Chinook features advanced technology including UK-specific avionics, a forward-looking infrared system, and interoperable communication and navigation equipment. It is undergoing comprehensive testing in Mesa, Arizona, before delivery to the UK later this year.

BAE 146 C.MK 3 AIRCRAFT FOR THE RAF

BAE Systems Regional Aircraft has delivered two BAe 146-200QC (Quick Change) aircraft that have been converted from commercial to military configuration for use by the Royal Air Force. After a period of familiarisation and operational trials, both aircraft have now been declared as Released To Service (RTS) by the Ministry of Defence. Known as the BAe 146 C Mk.3, the two aircraft have been converted under a £15.5 million contract awarded to BAE Systems Regional Aircraft under an Urgent Operational Requirement (UOR) to augment tactical aircraft numbers, particularly the Lockheed C130 Hercules force, during the upcoming extraction phase of Operation Herrick, the current Afghanistan campaign. The company has been responsible for the design and integration of the equipment to be fitted to the aircraft, the sourcing of the equipment and management of the supply chain and overall management of the conversion programme. The actual conversion was carried out at the Hawker Beechcraft Services, Chester, under sub-contract to BAE Systems.

Among the military equipment fitted is a Defensive Aids System to enable these aircraft to be protected to appropriate levels, at least equivalent to other UK aircraft operating in Afghanistan. Also installed is a Successor Identification Friend or Foe (SIFF) system. A number of other upgrades have also been installed including HF and UHF radio communications systems and a SATCOM satellite communications system. An armoured flight deck has been incorporated along with fuel tank inertion, air conditioning upgrades and a fire protection D-C system in the baggage bay. The BAe 146 C Mk.3 is equipped with a large rear upward-opening freight door giving a large aperture for the easy loading of pallets, containers and awkwardly-shaped cargo. The large cabin volume of the aircraft will allow up to 23,500 lbs (10.6 tonnes) of freight to be carried. The cabin floor of the aircraft has a freight loading system which allows either palletised freight or passenger seating fixed to pallets to be



rapidly installed. The passenger layout of 94 seats is to full commercial aircraft standards and there are also two large underfloor baggage holds.

In order to further broaden the versatility of this aircraft BAE Systems has engineered two further interior options for the RAF. It has sourced and received Civil Aviation Authority (CAA) approval for new cabin baggage platforms and containers and cargo pallets. When installed on the aircraft this gives an alternative layout of 54 seats and a significant amount of carry-on baggage allowance in storage containers that can carry Bergens and other bags. The containers and their associated pallet are fork-liftable, even when loaded to their maximum weight, thus aiding rapid turnaround. BAE Systems has also cleared a palletised freight layout for use on these aircraft, rather than the usual BAe 146QC freight igloos, to allow easier transhipment of loads between differing aircraft types in the RAF transport fleet. Both aircraft are assigned to the RAF's 32 (The Royal) Squadron which already operates two BAe 146 CC Mk 2 aircraft, primarily in the VIP transport role from RAF Northolt.

70 years on - the Damb

May 16, 2013, will mark 70 years since 19 Lancaster bombers took off from RAF Scampton in Lincolnshire, on a mission to destroy German dams with a revolutionary 'bouncing' bomb. The airmen of 617 Squadron, commonly referred to as 'The Dambusters', took part in this landmark British raid on Germany, a pioneering moment in British engineering and a significant event in Royal Air Force History.

From May 13-17 the RAF Museum at Hendon will have on display a selection of artefacts from the Dambusters Raid not normally on view to the public. These include photo-reconnaissance of the Dams before and after the Raid, a facsimile of Guy Gibson's logbook and the original draft of his book 'Enemy Coast Ahead', plus letters from various crewmembers to family members on the home-front and part of the Möhne Dam itself. These items will be located in display cases by the Museum's Lancaster Bomber.

On May 17, the Museum's London site will be open late to the public for 'Dambusters Night' as part of this year's international Museums at Night Festival. Members of the public, aged 18 and above, will be able to watch a short film on the preparations and testing of the bouncing bomb as well as seeing test footage (from the film archive) on the big screen. They'll also be able to see the original testing equipment used in the film 'The Dam Busters' and attend a mini-lecture on the subject of the development of bombing from the First World War up to the Dams Raid before taking part in a debate about the effectiveness of the Raid itself. The Museum will also have on display, in a newly refurbished permanent exhibition, a replica of Sir Barnes Wallis' Brooklands office which will feature his actual drawing board and the models, photos and books that inspired him to create the bouncing bomb; whilst members of the Museum's curatorial team will be on hand to answer any questions that visitors might have about the artefacts on display.

and aviation events

COOPERATION ON CAMM

The core Team Complex Weapons (Team CW) air defence missile development programme – the Common Anti-air Modular Missile (Camm) for the Future Local Anti-Air Defence System (FLAADS) – has been the catalyst for the creation of a new business relationship between MBDA and Thales UK's Belfast site. Over the last year, as part of on-going activity to develop the UK Complex Weapons (CW) supply chain and to realise the complementary skills of Thales, the two companies have been exploring opportunities to work together on Camm, drawing on the missile design and manufacture capabilities in Northern Ireland. Work placed with Thales Belfast on this important development project now exceeds £1M and has also opened up opportunities for a further £8M

of manufacturing work in the next phase of the project. Thales is involved in a number of aspects of the Camm Demonstration project with work now covering the assessment and modelling of the thermal management within the missile, structural analysis work, and the use of precision manufacturing capabilities to make a number of the missile components.

The companies are now exploring a number of areas of likely cooperation across other projects and throughout the product lifecycle. In the area of In-Service Support (ISS), for example, they are working together to see what additional value can be delivered to the UK customer by exploiting the opportunity created by the British Army re-basing decision to bring all of



its current air defence assets together at Thorney Island. In addition, MBDA and Thales UK's Basingstoke site have also taken significant steps forward over the last six months using two pilot projects, focused on missile safety and arming units and intelligent fuzes, to transform the traditional transactional customer-supplier relationship into one where both parties are actively working together. In January 2012, MBDA selected Thales Basingstoke to supply the Camm laser proximity fuze under an £11m contract.



PAVING THE WAY

The Royal Air Force's No 6 Squadron, based at RAF Leuchars, has continued to develop the multi-role capability of Typhoon by dropping inert Paveway II bombs for the first time from the Tranche 2 version of the aircraft. Pilots embarked on a series of training sorties over Cape Wrath Range delivered this capability as part of 'Combat Ready' training work-up sorties. Officer Commanding No 6 Squadron, Wing Commander Mike Baulkwill, said, "The last time the squadron as a whole conducted end-to-end air-to-surface weapons training would have been when it was flying Jaguars, so this is a fitting return to bombing for the 'Flying Can-Openers'. Given the previous air defence role of the station, I also suspect that it has been a long time since a Leuchars-based squadron has delivered a bomb!"

RPAS PILOTS AWARDED WINGS

In the first graduation ceremony of its kind four RAF pilots have been awarded their specialised RPAS pilots badge at Creech Air Force Base in Nevada, USA. The graduation follows the announcement in December by the RAF of the creation of a specialised flying branch for those flying Remotely Piloted Aircraft. The announcement is recognition within the RAF of the growing complexity and capability of Remotely Piloted Air Systems and their increasingly pivotal role on operations.



Dambusters are remembered

London commemorations will finish on May 19 with the fourth annual Hendon Model Show which is dedicated, this year, to the men of 617 Squadron. The RAF Museum Cosford will be marking the 70th anniversary of this event with a Dambusters-themed Orchestra Concert, a special talk entitled 'Operation Chastise - 70 years on, the successful failure', a flypast from the Battle of Britain Memorial Flight Lancaster and a bespoke model display depicting the raids.

Dambusters Concert

The highly decorated Glebe Symphonic Winds, one of the UK's leading wind orchestras, will perform for visitors on Sunday May 12. The performance will begin at 3.00pm and last approximately one hour. Tickets for this event cost just £5.00 per person.

Dambusters Talk

For anyone looking to learn more about this topic, there

will be a free evening talk for up to 200 visitors, entitled - 'Operation Chastise - 70 years on, the successful failure'. This event on May 16 is free of charge and will last approximately 1 hour. It will commence at 5:15pm in the Museum's Auditorium and anyone wishing to attend must register in advance.

Flypast in honour of the Dambusters

The Battle of Britain Memorial Flight (BBMF) will be supporting the Museum's '70th Anniversary of the Dambusters' event on Thursday May 16, with a Lancaster flypast. This is scheduled to take place at 12.30pm weather permitting.

To reserve a place for the talk, or to purchase tickets for the Dambusters Concert, call the Museum on 01902 376252 or for more information, visit the Museum website www.rafmuseum.org. The Museum is open daily from 10am and entry is free.



80th Anniversary of First Flight over Everest

On April 3, 1933, the historic first flight over Mount Everest took place when two Scots airmen from 602 Squadron of the Auxiliary Air Force flew two Westland Wallace biplanes on an extended flight over the world's highest peak. The Squadron Commanding Officer, Lord Clydesdale, and his 'B' Flight Commander, Flight Lieutenant David McIntyre, were the two pilots who braved the extreme elements together with the observers/cameramen, not once but twice, as a second flight was carried out on April 19.



The flights, which made international headlines at the time, broke new records for sustained flight at 33,000 ft carrying two crew, cameras and life support equipment. They achieved the geographical objectives of the mission to map the area around Everest and succeeded in pushing back the boundaries of aviation knowledge and paving the way for the high altitude passenger transportation that followed. Two years later in 1935 Clydesdale and McIntyre founded Scottish Aviation Limited and also established what is now Prestwick International Airport. Originally established as a flying

school, Scottish Aviation developed over time into a wide range of aviation activities including aircraft manufacture and maintenance.

The legacy left by these two pioneers is a strong aviation hub at Prestwick of which BAE Systems Regional Aircraft - the direct descendant of Scottish Aviation is a key part.

Nearly 1,000 aircraft were built at Prestwick by the company between 1947 and 1998. Aircraft types included

the Prestwick Pioneer, the Twin Pioneer, the Bulldog military trainer, the Jetstream T Mk1 and 2 for the Royal Air Force and Royal Navy, and the Jetstream 31/32 and Jetstream 41 regional turboprop airliners. Today BAE Systems Regional Aircraft is an engineering and support business that is responsible for the ongoing technical and business support for some 500 BAE Systems-built aircraft (including Prestwick-built Jetstream 31/32 and Jetstream 41 turboprop airliners).



ABOVE - A Yeti Airlines Jetstream 41. This aircraft is one of seven operated by the airline on domestic flights and also scenic flights over Everest. On the anniversary date it flew a group of people on a scenic flight over Everest including Charles Douglas-Hamilton, the grandson of one of the two fliers who carried out the historic flight.

LATEST RAF HISTORY BOOKS

The latest two books to be published by Pen & Sword Books should be of great interest to many readers who follow RAF history.

"Winged Crusaders" by Michael Napier (ISBN: 9781781590591) RRP £25 is a definitive history of the exploits of No 14 Squadron from 1915 until the end of the Second World War. This 208 page hardback features over 200 photographs and 19 maps and vividly records the sacrifices, successes, victories and problems of this famous squadron, through a fascinating succession of eras. The unit, which is still flying today, is one of the longest serving in the RAF and spent its first thirty years operating in the Middle East. The detail contained in this new book is impressive and covers a wealth of new information and illustrative material which has been collected together from official and private sources after an extensive period of research. The author was well qualified for this task as a former 14 Squadron Tornado pilot who became Hon Secretary of the 14 Squadron Association in 2003. He is now

a commercial airline pilot. His book includes an exhaustive list of every aircraft that has served with the squadron during the period covered, including the names of aircrew lost or wounded and the circumstances of such incidents. Full details are also given of all the different aircraft types flown by the squadron, with beautiful colour art depicting the in service aircraft in all variations of squadron markings. But this book is much more than a reference book for enthusiasts. For historians it provides a thorough insight into the people, the inter-service politics and the military policies throughout two world conflicts and a continuous inter-war period of overseas air policing. How the early squadron pilots and ground crews kept their flimsy flying machines operating in primitive local conditions, often repairing damaged

continues on page 7

News from The LEADING EDGE

Visit to BA Simulator

"150kts..Rotate.. She climbs like a bat out of hell."

I was lucky enough to be selected for the BA simulator visit and cabin crew tour which took place in the evening of Tuesday 5th March at the famous BA Cranebank site situated at London Heathrow. We were met at the gate by trainer Andy Chubb who guided us to our meeting room and gave an introductory talk and briefing on the evening's events. We were also introduced to our pilots for that night's sortie including the Air League's finest: Andrew Perkins, without whom this fantastic experience would not have been possible.

To start the evening off we were taken to the cabin crew training building and put through our paces on the evacuation slides, followed by my first (and hopefully only) experience of a cabin filling with smoke during flight. All too soon it was time to leave that facility and return to the conference room to have our pre-flight briefing on the 747-400 simulator - it was time to take to the skies. Daniel, Mike and I were taken to the flight deck of simulator number 4 by our pilot

Edward Garner, who showed us the main parts of the sim before letting us loose on it. I went first and took the seat as First Officer. With one hand on the control wheel and the other on the thrust levers: I advanced them to take off power and engaged the auto throttle. She accelerated very swiftly to our rotate speed of 150kts, I applied back pressure and the nose rose up and we were airborne. Climbing to 3,000ft I got used to the difference between the 747 and my usual aircraft, the DA42. I completed 3 visual circuits followed by 3 ILS approaches and landings, each one increasing in difficulty. My final ILS was using manual thrust and no flight director and, I have to say, it was the best landing of my career. A true "greaser"! My first experience of the Queen of the Skies was truly awe inspiring and totally unforgettable. I would like to thank everyone who made the evening possible especially Edward, Andrew, and trainer Andy for taking time out of their busy schedules to accommodate us living the dream.

Alexander Roberts

Inner City Gliding

A bleak grey morning with snow swirling around the hangar doors; it was definitively the middle of the UK spring alright! Fortunately the cold murk was shattered by the sound of laughter as 20 students from Skinners Academy poured out of the coach and hurriedly made their way to the clubhouse at London Gliding Club. There was a real sense of excitement in the air and the clouds even managed to part briefly to allow a glimpse of the fiery ball in the sky that has been absent for so much of this year.

Today was to be the day all had anticipated for so long. It has long been a desire of The Air League Trust to reach out to the inner city demographic with its charitable work. The gliding to solo scheme (GSS) aims to fulfil this ambition by giving young people from the inner cities the opportunity to experience gliding and after further selection through an application form and interview process, to undertake a two-week gliding scholarship. The scheme is funded by Boeing with support from Linklaters and will be conducted in this instance at London Gliding Club.

So with all raring to go, I distributed all my coats and outdoor gear to the young ladies who found the conditions cooler than they had wished! Comments like "that was amazing," "I didn't think I would ever do that!" "That is most exciting thing I have ever done" were common phrases overheard after each experienced their first 20 minute glider flight.



The GSS scholarships will not purely focus on urban young people experiencing aviation, but use it will use aviation as a tool to allow those individuals to develop their life skills. Although this has taken some serious choreography behind the scenes the process that is evolving is giving very positive results and is highlighting to individuals just what they are capable of and importantly that by giving it a go and believing in oneself anything is achievable.

Andy Perkins

Latest RAF Books continued

aircraft with whatever came to hand in remote corners of the desert, brings home just how enterprising these pioneers were. The way that the squadron operated during its WW2 days in desert sweeps and on missions against enemy land and sea targets makes for a very good read, supported by relevant wartime photographs that are fully captioned.

"1 Group- Swift to Attack" by Patrick Otter (ISBN:9781781590942) RRP £25 The author, a professional journalist, has written a comprehensive account of the exploits of 1 Group Bomber Command, with a special focus on the men who contributed to its exploits.

This 368 page hardback book reflects well the outstanding bravery of the aircrew who faced a living hell every night over enemy-occupied Europe, yet who somehow managed to complete their missions, navigate their way back to base, avoiding flack and enemy night fighters, often flying through appalling weather, and in all too many cases then facing disaster in the last few minutes of a night-long mission. Patrick Otter tells the tale with passion as well as an eye for detail, which makes the volume very readable. He is well qualified to write such a book for he has become an expert on Bomber Command and in particular the history of

the wartime Lincolnshire and Yorkshire airfields, their men and units. His own father was one of the 55,000 Bomber Command wartime casualties who never came back. Official recognition for the achievements of the wartime "Bomber Boys" has taken a long time to arrive, but the controversy concerning mass bombing policy over Germany was understandable. This book provides a close-up study of the human aspects of 1 Group's history, including many tragedies and accidents, and this acts as a reminder that there were huge losses of life experienced during flying training and routine operational conversion and en-route transits as well as on bombing missions. No 1 Group was born out of the ashes of the RAF's light bomber force that had been decimated over France during the early weeks of the war. By the end of the war, it had lost a total of almost 1,900 aircraft and 8,760 men, flying from 23 different airfields, yet its squadrons dropped the highest number of bombs in Bomber Command. How the speedy completion of the vast web of new airfields was commissioned, along with the accompanying problems, from lack of basic facilities to water-logged runways, gives a good idea of the uphill struggle station commanders had in getting these facilities up and running as quickly as possible, and then adapting to newer and better aircraft as the war proceeded. This is a truly fitting tribute to everyone who served in 1 Group during the Second World War.

MEMBERS' NEWS



ABOVE - Oliver Vass with Sir Roger Bone and G-YTLY

Oliver Vass featured in a recent presentation at Farnborough where he was able to explain to an invited audience of aerospace professionals his role in the Boeing / Royal Aeronautical Society Build a Plane Challenge. This took place on April 12 as a sponsored event to congratulate British students and teachers after the successful first flight of the two-seat light aircraft they constructed. Yateley School in Hampshire became the first school to build and fly the plane as part of the Build a Plane Challenge. This aims to motivate young people in the areas of science, technology, engineering and maths (STEM). It also encourages young people's awareness of the aerospace sector, demonstrates its economic importance to the UK and offers them a wide array of related career paths. "This initiative has been a fantastic learning experience," said Oliver, 16, a student at Yateley School. "Being involved in the Schools Build a Plane Challenge has not only increased my knowledge of the aviation industry but also

has given me valuable team-building skills. Working alongside aviation experts has broadened my understanding of the changes over time in aviation, while learning different techniques that have helped me during the project and also will benefit me in the future." Oliver has been undertaking an Air League-sponsored gliding course at Lasham, Hampshire, and told the editor he is delighted to be chosen to have such help, which has underlined his determination to seek an aviation career.

The Schools Build a Plane Challenge was launched in 2008 and is supported by Boeing and managed by the RAeS in association with the Light Aircraft Association (LAA). The team that built the Yateley aircraft also included students from Court Moor School in Fleet and Kings College in Guildford. "On behalf of Boeing, I congratulate Yateley School, the Royal Aeronautical Society and the team of dedicated volunteers that supported them in this project on their incredible

achievement," said Sir Roger Bone, president of Boeing in the UK. "The future of the UK aerospace industry depends on encouraging young people to consider rewarding, sustainable careers in this sector. The Schools Build a Plane Challenge is part of Boeing's global commitment to the communities in which we work. It aims to inspire young people to explore the wide variety of aerospace careers available to them, not only with Boeing but also with our extensive supply chain here in the UK."

The aircraft, G-YTLY, a RANS Coyote 2, was built from a kit by the students, supervised by teachers and local volunteers from the RAeS and LAA along with support from Boeing. The aircraft is currently under test flying conditions and once this is complete G-YTLY will receive a Permit to Fly. "The plane is very well put together," said John Michie, the project's experienced test pilot. "It performs flawlessly." Caroline Uttley, Head of Science at Yateley School said "We have worked hard on this project for the last four years and it is amazing to see it coming to a successful conclusion. The students have had so many opportunities to talk to a wide range of people to discuss issues ranging from light aircraft building techniques, careers in STEM and employment opportunities. They are very proud of their achievements and the project has made a large, positive impact on their lives.

New Members

Corporate Members: Airship Association

Full Members: Miles Bailey, Jason Nuttall, Mark Podbery, Witold Sopel, Frances Stuart, Samantha Waller, Adrian Whittingham, Joe Wood

Student Members: Ryan Ferrie, Sebastian Haley, Geraldine Hill, Ryan Hill, Matthew Hogg, Ben Hughes, Nick Jenkins, James Johnston, Joel Kemp, Alessandro Marsella, Michael Miklos, Paul McDonald, Sophie O'Brien, Scott Patterson, Mike Perham, Simon Sladden, Richard Smith, Jake Southern, Ilya Robbins, Victoria Wicks, Robert Williams, Douglas Wood

Diary Reminders

4 May: Bicester Flying Day
14 May: Annual Reception, St James Palace, London
13 June: AGM, RAF Club, London

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

AGM and Annual Accounts

The AGM will take place in the RAF Club at 4pm on Thursday 13 June 2013.

The Annual Report and Accounts will be posted on the Air League website (www.airleague.co.uk) during May.


THE AIR LEAGUE

Broadway House
Tothill Street
London SW1H 9NS

Tel: 020 7222 8463
Fax: 020 7222 8462

E-mail: exec@airleague.co.uk

Editor: Richard Gardner
Material for consideration for inclusion can be sent via The Air League's office.