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# GUILD NEWS

THE GUILD OF AIR PILOTS AND AIR NAVIGATORS





# GUILD NEWS

## THE GUILD OF AIR PILOTS AND AIR NAVIGATORS

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Company of the City of London.  
(Letters Patent 1956)

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# Guild Diary

## June 2010

10	Pilot Aptitude Assessment	RAF Cranwell
12	Garden Party	RAF Brize Norton
17	3rd General Purposes and Finance Committee Meeting	Cobham House
17	New Members Briefing	Cobham House
24	Election of Sheriffs	Guildhall
25-27	AeroExpo 2010	Wycombe Air Park
29	2nd Education and Training Committee	Cobham House

## July 2010

1	Trophies and Awards Committee	Cobham House
13	Benevolent Fund Board of Management	Cobham House
13	2nd Technical and Air Safety Committee Meeting	Cobham House
15	4th General Purposes and Finance Committee Meeting	Cobham House
15	2nd Court Meeting	Cutlers' Hall
25	Guild Sunday	St Michael's Cornhill

## August 2010

5	Pilot Aptitude Assessment	RAF Cranwell
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## September 2010

16	5th General Purposes and Finance Committee Meeting	Cobham House
16	3rd Court Meeting	Cobham House
21	3rd Education and Training Committee Meeting	Cobham House
22	GAPT/AST Meeting	Cobham House
29	Election of Lord Mayor	Guildhall
29	Guild Luncheon Club	RAF Club
29	Sir Frederick Tymms Lecture	Royal Aeronautical Society

## October 2010

7	Pilot Aptitude Assessment	RAF Cranwell
12	3rd Technical and Air Safety Committee Meeting	Cobham House
14	6th General Purposes and Finance Committee Meeting	Cobham House
21	Trophies and Awards Banquet	Guildhall

## GUILD VISITS PROGRAMME

12 June	RAF Brize Norton Families Day and Guild Garden Party
9 July	Special Visit to Windsor Castle
1 - 3 September	Flight Training, Europe
9 September	RAF Valley
14 September	RAF Boscombe Down

Please see the Flyers accompanying this and previous editions of Guild  
News or contact Liveryman David Curgenven at [guildevents@dcai.co.uk](mailto:guildevents@dcai.co.uk).

*Cover Photo: A diamond nine of Tiger Moths, participants in the Air Display  
at Marshall's 100th Anniversary celebration at Cambridge Airport in 2009.  
The high standard of formation keeping in such low powered vintage aircraft  
demonstrates the skill levels that many General Aviation pilots can achieve.  
Photo courtesy of Paul Eldridge, Design Team Manager, Marshall Design  
Team, Airport House, Cambridge.*

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# NEWS

## ROUND UP...

### APRIL GUILD NEWS CORRECTION.

Assistant Michael Glover's name was regrettably omitted from the Court List published in April Guild News. The Editor offers his apologies and will ensure the error is not repeated.

**LIVERY DINNER.** This year's Livery Dinner took place on 27th May, at the Drapers' Hall. Before the Dinner there was a Court meeting at which seven new Liverymen were clothed; they are Ms Sarah Caroline Holt, Gp Capt Simon Brailsford, Timothy George Alexander Prince, AVM Malcolm Graham Forester White, Sqn Ldr Alexander Nicholas Goodwyn, George James Carrick Capon and Dr Jack Antone Milavic. Five Master Air Pilots certificates were presented to Sqd Ldr Alasdair Fraser Morrison, Flt Lt Neil Cottle, Sqd Ldr Richard John Henry Fallis, Flt Lt Charles Vincent Brown, Capt Peter Anthony Holstein (coming all the way from Australia). The two principal guests were ACM Sir Stephen Dalton and Sheriff Peter Cook. This issue of Guild News went to press before the Dinner so the report will be published in August Guild News. Photos of the event will also appear in August Guild News and can be accessed on the photographer's website [www.sharpphoto.co.uk](http://www.sharpphoto.co.uk).

### IV(AC) SQUADRON DISBANDMENT.

IV(AC) Squadron, one of the Guild's affiliated units, has been disbanded as part of the ongoing restructuring of the RAF. The squadron number plate has been transferred

to the Harrier OCU, based at RAF Wittering, which will now assume the status of a Guild affiliated unit.

### THE END OF MILITARY FLIGHT TEST.

**STOP FIDGETING** by Past Master Hugh Field.

1st April 2010 saw the end of military flight testing in the form in which it has been carried out at Boscombe Down for 70 years. The Fast Jet Test Squadron (known for obvious reason as "The Fidgets") was disbanded leaving the vestigial remains to be banished to Coningsby, Lincolnshire

A dinner was held in the Officers' Mess of the Air Warfare Centre on 19th March and was attended by 125 past and serving members of the Squadron and their guests. Among those present from the testing fraternity were Past Masters Duncan Simpson and Hugh Field together with Liverymen John Brownlow and David Bywater. Before dinner the gathering was treated to a presentation on 70 years of activity at Boscombe Down followed by a look into the future given by the Squadron's Commanding Officer, Wing Commander Paul Shakespeare.

Taking over from Martlesham Heath in a redeployment following the start of World War 2, Boscombe Down soon became responsible for testing all new military aircraft and equipment. During the war most of the work involved piston-engined aircraft, the many Spitfire

variants, Hurricanes, Defiants, Beaufighters, Mosquitos, Whirlwinds - the variety was endless.

By 1944 the first jet types made their appearance, marking an even larger step into the unknown than had previously been experienced. Helicopters widened the range and the unit - by now known as the Aircraft and Armament Experimental Establishment (A squared, E squared to its friends) expanded to a five-squadron structure with a huge technical support including aerodynamic, weapons and electronic disciplines.

Fighter aircraft became the responsibility of A Squadron, B Squadron dealt with the "heavies", C the naval types, D the transports and E the helicopters.. All drew their pilots from the output of the Empire Test Pilots' School at Farnborough and comparable establishments in France and the United States. While the pilots would be assigned to a particular aircraft project they were likely to fly any type on the squadron when required.

For A Squadron the 1950s and 60s were regarded as the heyday when the first-generation jets provided varied and demanding challenges. High-Mach characteristics were often not predicted accurately by the manufacturers and all needed exploring to the limit before a new aircraft type could be released for squadron use. The transonic generation of fighters, typified by the Hunter and Swift, was followed in the 1970s by the highly supersonic Lightning but the number of variants was reducing.

With the lower workload the Boscombe Down establishment began to thin down - a process that owed more to the funds available to politicians than it did to the

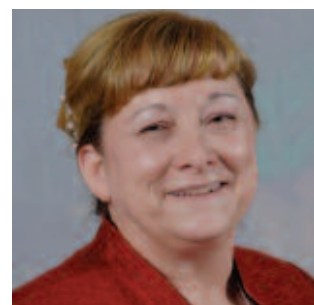
### TRISH BECKMAN.

Warden Dorothy Pooley writes: Trish was awarded the Master Air Navigators certificate by the Guild in 2009 and is believed to be the first woman ever to have received this award. She was the first woman ever to qualify as a crewmember in the F-15E programme and the first American woman to qualify as a crewmember in the FA-18D. During her 28 years in the US Navy she flew in 67 types and rose to the rank of Commander. Trish helped to influence the US Senate to repeal the combat exclusion laws and change policy allowing women to fly aircraft engaged in combat missions. She has over 5000 hours as a Navigator on 71 types of aircraft and

since leaving the US Navy has worked for Boeing in their test department. She was the navigator on the Round the World test flight of the Boeing 777.

Trish is a Charter Board member of Women in Aviation and was inducted into their Hall of Fame at this year's conference in Orlando. The day before that ceremony in recognition of her tremendous service to aviation, she was awarded two beautiful trophies by her fellows from her first operational flying community (1982-1985, TACAMO, EC-130Q aircraft) and also by the WMA (Women Military Aviators). Trish lives in Seattle and joined the Guild after meeting Dorothy Pooley at a previous Women in Aviation conference. As soon as Trish

heard about the Canadian Region of the Guild, she immediately volunteered for the post of Chairman of their Technical, Air Safety and Regulatory committee and with her vast experience of both military and civilian aviation she is extremely well qualified to lead this committee for our newest Region. Additionally she has joined the Board of the Canadian Region.



technical needs. For A Squadron the ultimate contraction was reached with the Eurofighter Typhoon whose manufacturer's development and military acceptance flying took place side-by-side at the BAE establishment at Warton, Lancashire.

Variants of the Harrier and Tornado provided work for the squadron through the early 2000s and justified its relabelling as the Fast Jet Test Squadron. But with all the flying concentrated on only one aircraft type the logic of co-locating the testing alongside the operational squadrons was inescapable. Some 70 personnel are moving to Coningsby, many being assigned to the present Typhoon squadrons, but a large technical tail will remain at Boscombe Down and Wing Commander Shakespeare himself expects to commute frequently between the two centres of activity.

One decision remains - the future of the Empire Test Pilots' School. The pilots at Coningsby will be "one-type" test pilots and the essence of the school's training, to prepare pilots to handle a variety of types will no longer be needed. The extremely lucky ones will still be offered exchange postings (one is currently in the United States flying the JSF, Joint Strike Fighter) but they will be few and far between.

**GUILD LUNCHEON CLUB.** Over 100 Guild members and their guests gathered in the RAF Club on 28th April for the second Guild Luncheon Club event of 2010. After an excellent meal they were entertained by Air Vice Marshal Graham Williams, who related his experiences as a member of the RAF Team that participated in the 1969 Daily Mail New York to London Air Race. The aircraft chosen was the Harrier, at that stage still very much in the test and development phase of its life, and without a clearance for air to air refuelling, an essential prerequisite for race participation. Graham described how the choice of landing sites was made; the London site was the infamous coal yard near Kings Cross, rapidly re-named RAF St Pancras but still full of coal dust. He showed the diners some fascinating video footage taken during the race in both New York and London and described his own return west to east crossing which started in terrible weather in an aircraft with a cockpit full of coal dust saturated by heavy rain. It was without doubt a pioneering event that pushed the boundaries of the aircraft and pilot's capabilities, yet was rewarded with success and a prize; the event without doubt had a major influence on the US Marine Corps who subsequently ordered the Harrier in large numbers. The audience was left with the feeling that such a bold concept would never get off the ground in today's risk

averse world.

#### **GAPAN SYMPOSIUM AIR DISPLAY FLYING, 19TH APRIL**

The Guild has continued its broad involvement with all aspects of aviation by holding a symposium on Air Display Flying at the RAF Club on the 19th April. The day was introduced by the Master, Dr Michael Fopp, who explained that the symposium was centred on increasing safety at Air Displays and at introducing the new pilot to the challenges of this special area of General Aviation. He emphasised that GAPAN was determined to assist all areas of aviation, including specialist areas such as this, to secure its long term future.

Warden Cliff Spink, a current warbird display pilot and CAA Display Authorisation Evaluator (DAE), then took the audience through some of the particular requirements required to gain a Display Authorisation (DA) and some of the pressures associated with maintaining a balanced and professional outlook and performance. He highlighted the need for a self-disciplined and critical approach to each display and the need to establish a mentor system to get the essential alternative view of the display pilot's flying performance.

Brian Lecomber then gave a practical insight into the pitfalls of display geometry with particular emphasis on check heights and energy management. With his many years of display flying in the unlimited category of aerobatics, Brian was able to give a penetrating look at the items that can cause accidents, and did so in a thoroughly straightforward style that left the audience in no doubt of the areas that are potential traps for the unwary.

Barry Tempest drew on his many years in display aerobatics, both as a participant and past member of the CAA staff to give a rundown and comment on the airshow accidents that had occurred worldwide during 2009. It was a sobering list albeit the UK had not figured in a major way in this list, but Barry emphasised the lessons that could be learnt from these accidents and needed to be transformed into continued focus on good practice in our training and continuity.

Mark Linney concluded with a stimulating session on some of the pressures that can and do affect the display pilot and this brought the human factors element of air display flying into sharp focus. Drawing on his experience as an RAF display pilot on the Harrier and the Hawk and latterly on some of the vintage jets he was able to highlight the pitfalls that can befall a display pilot when external influences are allowed to affect cockpit performance.

Cliff then chaired the panel of presenters who answered a wide ranging series of questions from the audience. It was stimulating day and the feedback in the Pub later, and from subsequent correspondence, indicated that the GAPAN initiative had been very well received and that this should be at the very least an annual event. In the meantime we hope to take forward the idea of smaller workshops for pilots where the individual disciplines can be discussed in more detail.

**LIVERYMAN AIR CHIEF MARSHAL SIR PATRICK HINE, CAPTAIN, ROYAL AND ANCIENT GOLF CLUB.** The Royal and Ancient Golf Club of St Andrews has announced Air Chief Marshal Sir Patrick (Paddy) Hine GCB GBE as Captain for the year 2010 - 2011. The new Captain will assume office later this year following the traditional driving in ceremony on 23rd September. Liveryman Paddy Hine became a member of The Royal and Ancient Golf Club in 1995. A distinguished amateur golfer, he was an England Boy International in 1948 and 1949 and won the Hampshire County Championship, the Carris Trophy and the Brabazon Trophy in 1949.

He joined the RAF in 1950 and trained as a fighter pilot. He was a member of 111 Squadron's Black Arrows formation aerobatic team from 1957 to 1959. Perhaps the most noteworthy performance by the Black Arrows was the celebrated loop and barrel roll of 22 Hunter aircraft during the 1958 Farnborough Display week. This is the greatest number of aircraft ever to have looped in formation, and is still a world record today. In 1975 Sir Patrick was appointed Director of Public Relations for the RAF and then Assistant Chief of Air Staff, Policy, Plans and Budget. He was Commander of Second Tactical Air Force and Commander-in-Chief RAF Germany in 1983, before being appointed Vice-Chief of the Defence Staff from 1985-87 and Air Officer Commanding-in-Chief Strike Command in 1988. From 1990-1991 he was Joint Commander of all British Forces during the first Gulf War.

At the end of a long and illustrious career he retired from the RAF in 1991. Sir Patrick then served as the Military Adviser to British Aerospace from 1992 to 1999, and worked as a defence and aerospace consultant from 1999 to 2005.

Resident in Christchurch, Dorset, Sir Patrick is a member of the Senior Golfers Society and the RAF Club. He plays to a handicap of 12 at his home Golf Club, Brokenhurst Manor, Hampshire. 

# The Master Writes

DR MICHAEL A FOPP

As I start to write this piece it is the middle of April, the sun is shining and the sky is very quiet. Last week the Guild held its Senior Instructors' Forum with the Central Flying School in the RAF College Cranwell and the week after the inaugural Guild Display Flying Seminar held at the RAF Club. These events were huge successes, marked by record attendances by experts in both fields. I was the most unqualified person to be in the room on each occasion, but I enjoyed welcoming the delegates to events which, but for the Guild, would not take place. These two opportunities for aviators to get together and discuss matters of mutual interest are the *raison d'être* of the Guild itself. In the case of both the Guild has picked up an initiative which was, in the past, the remit of the CAA, but which had fallen by the wayside of cost-cutting, efficiency and a drift away from what I call, 'participative interaction' by regulator with the regulated. This is happening not only with the CAA, but seems to have been the point from which EASA started and from which the EU is sensibly, yet tentatively, seeking to draw it away in the interests of carrying the aviation community along with it. This has got to be the way to do things, but as with so many important initiatives in the UK, when the Government (or its Agency) stops doing something important one or more responsible and caring voluntary sector organisations step in. Thus GAPAN has stepped in with keeping Instructors up to date and prepping Air Display Pilots & Operators just before the season commences. Not only is this a good thing to do, but it also avoids the Regulator coming to the conclusion that 'the industry is not doing anything itself so we will increase the regulations to cover the lack of self-help'. In the case of the Instructors' Forum the CAA was present and spoke, and in the case of the Display Seminar the Regulator had given it a blessing and was pleased that we had re-introduced such a meeting.

At the Cranwell Forum all the delegates that flew in were grounded and a number from overseas missed the Display Seminar. This was because of the closure of Class A airspace following the Icelandic volcano eruption. I hope that, by the time you read this, things will be back to normal for the travelling public, but I suspect the knock-on

effect to businesses, particularly the Air Transport Industry, will take some time to recover and some may not even survive.

As the events unfolded my first reaction was that such an early and massive closure of airspace was unnecessary, disproportionate and seemed to be more about potential liability than safety. I waited for a few days believing that I would see Met Office forecasts on the TV which showed scientific evidence of the scale and danger of the ash cloud. I assumed that as the days went on I would be bombarded with expert evidence which would confound my early, inexpert assessment of the problem.

After six days had passed none of the above had happened. The UK's atmospheric test aircraft based at Cranfield (a modified 146 which I know well for it sits in a hangar opposite my own aircraft) is grounded for maintenance, so the scientists are using a less-capable substitute. The original closure of airspace decision appears to have been by officials from the CAA, NATS and the Met Office, albeit in consultation with colleagues in Europe. However, the actual aircrew and operators, who make flight decisions on a minute-by-minute basis seem not to have been consulted. In the first week of this airspace closure it is estimated that the airline industry alone lost \$1billion. BA, with Willie Walsh on board, flew a 747 on a test flight and concluded "The analysis we have done so far, alongside that from other airlines' trial flights, provides fresh evidence that the current blanket restrictions on airspace are unnecessary" (The Times, 20 April 2010).

Mr Walsh's comments echo a similar concern the Guild has had for some time relating to the inability of anyone to take responsibility. He commented that the CAA took its decision on what it was told by NATS who said that they based their advice on what they were being told by the Met Office. This 'pass the parcel' approach results (when the music stops) with the Met Office stating that they were only providing weather forecasts! At the Guild Technical & Air Safety Committee meetings we have been discussing, for some



months, a similar game of 'pass the parcel' between Ofcom and the CAA regarding the charging of fees for use of the aeronautical radio frequency spectrum. Ofcom wants to raise money from charging (it claims this is not the primary aim, but it is difficult to see any other) and when the implications for the safety of aircraft and crews is pointed out it tells us that safety is not its responsibility, we must talk about safety to the CAA. The CAA, of course, tell us that radio frequencies are not its business, we must make our case to Ofcom. And so the parcel moves around.


At a teleconference held between the European Commission and Eurocontrol on 19 April to discuss the ongoing situation relating to the volcanic ash cloud, the primary aim seemed to be to justify the original decision as being appropriate and proportionate and then to find a way of "harmonizing" the ongoing airspace restrictions. Only then did they seek to find alternative scenarios to get air transport moving again. However, they still chose the least effective and most risk-averse option. Why did they not consult the pilots and operators more closely at the outset? Had they done so they would have found an industry which is based on zero tolerance of operations outside the certified operational conditions set for the aircraft. They would have found an industry, unique in my experience, where safety takes precedence over commercial imperatives at every level, and when there are lapses, systems are in place to blow the whistle to confidentially report on the miscreants. In other words they can trust, and should have trusted, the experts to advise them of a common sense and safe way of dealing with the extraordinary circumstances of the ash cloud. By then Willie Walsh had brought home 26 of his aircraft and demanded that

they be allowed to land in the UK.

Looking back this incident has done more to reinforce, for me, the creeping bureaucratic, politically correct, health & safety culture we have brought upon ourselves through our complacency and lack of action in the past. We have allowed experts to be ignored and positively encouraged so-called 'specialists' to flourish. Just three examples illustrate my point. Law enforcement, healthcare and traffic management have 'invented' new non-expert professions in recent years, usually to save money by lowering training standards. The result is that our hospitals are dis-organised, our streets are not safe and our roads are in a mess. So many things go wrong that we are constantly looking for someone to blame. This has resulted in a general culture where experts are reluctant to speak up and these 'specialists' are taught to offer only the solution with the least risk and consequential liability. Safety is being used as a cloak for doing nothing, or increasing regulation. There seems to be a belief that risks can be brought down to zero and that to attempt to manage risk responsibly will be greeted with a legal challenge if anything at all goes wrong. Making a new law is not the solution to rising crime; making an unenforceable law discredits the legal system.

Who has determined that Air Traffic Controllers and Meteorologists can (without, it seems, talking to the experts who fly and operate the aircraft), at a stroke, close airspace to legitimate users? I hope this whole business will, in due course, be a watershed in our thinking about the blame culture we have created and the results it leaves us with when we lose the 'participative interaction' by regulator with the regulated I mentioned earlier.

Weather has always been the worst enemy of pilots and operators. Pilots have been flying through volcanic ash without, in many cases, even knowing it since long-distance flying began between the two World Wars. Whilst the conditions of the Icelandic Volcano are unusual, they are not unique. Pilots know that thick ash will stop engines, but it is about density and content of the ash. I am not aware of a single life being lost as a result of ash bringing down an airliner, but I am aware that engine manufacturers go to great lengths to ensure their engines will withstand significant ingestion of nasty stuff, including hailstones. Other countries (notably New Zealand in 1996) have shown that, through proper planning, flexible procedures for safe operations quite close to volcanic ash clouds can be possible. I suspect that these conversations and

contingencies had not been held when the first decision was made; I question the scientific data that was used (not its quality - I do not think it actually existed at the time the initial decision to close airspace was taken on 15 April), the risk analysis carried out and the consultation process. I believe that these were all defective and the following days were spent justifying an already unsupportable decision. I hope, therefore, that some good will come out of this. What we don't want, in my view, is a Public Inquiry for that will take time and the solution is obvious anyway. I am given to understand that the Regulator will, in the future, consult with a 'Panel of Experts' before such airspace closure measures are imposed so extensively again. This is a lesson well learned and will ensure that future decisions will carry the involvement of stakeholders with them. This will increase confidence that the decision has been properly framed with expert help. As with our support for Instructors and Air Display Pilots, the Guild is ready to be a part of anything which will help achieve a common sense and balanced approach to future problems. 

## Environmental Committee

PROFESSOR DIANA GREEN, DEPUTY CHAIRMAN, ASSISTANT TO THE COURT

**T**he second meeting of the new Environmental Committee took place on 16 March 2010. This is a new Committee set up following the Guild's Strategic Review which emphasized the Guild's aim of raising its public profile and being seen as a major contributor and influencer in the important policy area of aviation and the environment. The main areas discussed were the aims for the Environmental Committee, the composition of the committee, the major issues to be addressed, the relationship with other organisations and the frequency of meetings. In summary, the Aims are:

- To be an acknowledged and authoritative voice on environmental issues associated with aviation
- To be an influential committee involving not just members of GAPAN with relevant expertise, knowledge and interest but also members from other interested and key aviation organisations.
- To maintain a close awareness of, and where appropriate, help shape the activities of other key organisations with a responsibility for environmental issues, namely Government departments,

Parliamentary Select Committees, politicians, international and national aviation authorities, aviation and aerospace companies and the work of other associations and societies.

- To be pro-active in engaging with the media, and to be a point of contact with the media for co-ordinated views; also to engage with the media in the overall interest of the aviation industry and aviators in general.
- To produce a Position Paper for the Guild in due course.

It is hoped that representatives of all the GAPAN regions will be full members of the Committee. George Done, Chairman of AOPA-UK was welcomed to this second meeting. It is hoped that other external members will attend future meetings.


The agenda for the Committee is huge and includes the following issues:

- Environmental impact (emissions, noise etc)
- Rules and Regulations (ICAO/EASA)
- Government Legislation, Intentions and Interests
- The influence of non-aviation organisations (eg RSPB, Greenpeace)

- Air Traffic Management issues
- Flight Operations management
- Interface between Environmental and Safety Issues
- International co-operation
- Industry developments
- Market Driven measures
- Innovation
- UAVs/RPVs
- Consumer Education
- Public Relations

Given the importance and topicality of the subject and the high number of issues, the committee plans to meet five times a year. Cameo presentations on environmental issues will be included as part of the format of future meetings.

In order to achieve its aims and raise the profile of the Guild in this area it was agreed that it would be beneficial to plan on holding a biennial conference with the inaugural conference in 2012.

Further consideration would be given at the next meeting to a proposal that the Guild should launch a high profile annual lecture on Aviation and the Environment in parallel with the annual Cobham and Tymms Memorial lectures. 

# The Volcanic Ash Crisis Learning Through Experience

FREEMAN STEPHEN SLATER

**F**or the air transport industry and for millions of its customers, April and May 2010 brought literally, seismic consequences. Volcanic ash generated by the Eyjafjoll volcano forced the biggest shut-down of airspace since the Second World War and, as our Master has eloquently summed up, raised significant questions about the decision-making processes within key regulatory bodies.

While many operators are experienced in safely working in the vicinity of volcanic activity, the scale and form of the recent eruptions have been unprecedented. It is therefore logical that neither scientists, regulators nor the industry have previous experience of a challenge on this scale.

A Contingency Conference was therefore organised by the CAA on 13th May, chaired by Professor John Beddington, the Government Chief Scientific Advisor who also advises the government's COBRA emergency meetings. It was attended by representatives of the UK airlines, Met Office, British Geographic Survey, and among others, GAPAN.

## River of Fire.

Sue Loughlin of the British Geological Survey explained the differences between the current eruption and many others around the world. The recent eruptions were in three phases, of which the second mixed water and steam from the overlying glacier with the magma, creating more violent explosions and higher plume altitudes with the creation of very fine ash.

Most volcanic eruptions tend to be for quite short periods, minutes to hours. The prolonged nature of the current eruption is unusual. The fine dust particles too are different and more troublesome, causing particular problems to aviation because they have low density, so they drift a long way. Their large variation in size also makes it difficult to measure concentration by means such as satellite imagery.

## The way the wind blows.

The wind flows from Iceland towards the UK about 25% of the time. The UK is therefore "threatened" by an Icelandic eruption on

about one in four of occasions that ash emissions occur.

The ash particles generated by the Eyjafjoll eruption have aggregated into what are effectively "ash snowflakes" which have been shown to float for up to 5 days. The UK Met Office utilises the NAME model for predicting the effect of the weather on atmospheric dispersion of particles, which has a good range of corroborating evidence to support its validity.

## Unsafe to fly versus Uneconomic to fly.

Volcanic Ash (VA) poses multiple risks to airframes, aircraft systems and electronics, but jet engine flame-out is the most significant safety risk. There are no certification standards for ingestion of VA. Indications show that the major long-term issue in Northern Europe will be a significant engine life reduction.

The ICAO initial recommendation of AVOID, has since been softened. Between 17-23 April, as Padhraic Kelleher, Head of Airworthiness at the CAA explained, a series of international teleconferences and engine OEM agreement, led to the current "2000 micrograms (2x10<sup>-3</sup>g/m<sup>3</sup>) limit plus a 60 nm buffer zone", with an enhanced procedures zone set to 2x10<sup>-4</sup>g/m<sup>3</sup>.

This ash zone, developed by the UK has now been adopted across Europe and permissions for overflight of the zone have been put in place. Manufacturers are now looking at the potential ability to increase the limit further. It is believed that most of the engine flame-outs over past the 30 years or so were in


concentrations of around 1000 times greater.

## Increased maintenance.

Although VA concentrations as high as 2000 micrograms are unlikely to cause immediate danger, they could damage the engines and increase maintenance. Most engines are supplied with a power-by-the-hour, effectively a fixed price maintenance contract.

There is therefore little incentive for engine manufacturers to be proactive in increasing the VA limit if it will result in greater maintenance costs which will have to be borne by them. The CAA has urged operators to engage with the manufacturers on this debate.

## What next?

Operators, legislators and scientists are working together. The Met Office is now providing VA forecasts for 5000ft layers and 3 hr time spans. Operators are pressing for a refined risk boundary of 20,000 micrograms, which would give a much smaller "no fly zone", while further test flights into the 'no fly zone' will attempt to identify what, if any engine damage is caused. Work is also being carried out on identifying the risks of flying in high levels of acidic Sulphur Dioxide also emanated from volcanos. By the time this article is published it is hoped a special Task Force have will reported back to the CAA on a new balance of safety concentration versus economic concentration limits. 



# Profile of Liveryman Tony Blackman

PAT MALONE

**F**ifty years ago next month, the first Avro Vulcan Mk 2 was delivered to the RAF at Waddington. That aircraft, XH558, is now the last Vulcan flying, coddled and cosseted back to life by a dedicated band of volunteers and their sponsors. If at all possible it will take to the sky on that anniversary, and there to see it will be Tony Blackman, the Avro test pilot who flew it to Waddington on July 1st, 1960.

Tony Blackman is every bit as remarkable as the Vulcan. Scientist, polymath, author, politician, marketing man and corporate fixer, he was one of a new breed of test pilot who spoke the language of the engineer and designer and understood in depth the aircraft's increasingly sophisticated systems. When he rolled the Vulcan off the top of a loop at Farnborough he was able to analyse every aspect of the manoeuvre scientifically - as well as getting the obligatory thrill out of it.

The fifties was a golden age in British aircraft manufacturing, and Tony Blackman was there to ride the wave. Dozens of companies were competing to produce better aircraft, military and civilian, more efficient engines, avionics for navigation, world-leading blind landing systems, missiles and weapons platforms. The V-bombers were brought to the runway, TSR2 was on the drawing board, Concorde was a twinkle in the eye and legions of test pilots were needed to keep the show on the road. Names like Avro, Vickers, Handley Page, de Havilland, Armstrong Whitworth, Saunders Roe, Westland Aircraft, English Electric, Fairey, Gloster, Shorts competed on airframes while Bristol, Armstrong Siddeley and Rolls Royce produced jet engines; lower down the market there were dozens of companies like Miles and Auster in the light aviation field. With due respect to Rolls Royce and BAe, we cannot be said to have built well on those foundations; how did we contrive to blow it? Bureaucratic meddling, politically-driven company amalgamations, industrial strife and poor management all played a part, but ultimately, says Tony Blackman, the British just don't get it. "Politicians have never understood how important it is to keep technology at the cutting edge," he says. "The cost of these projects is never measured against the cost of not doing them. We don't realise how important manufacturing is, although our politicians pay lip service to it.

"The French, on the other hand, know the value of technology; French civil servants and politicians have a much better grasp of reality than our own, unfortunately. People

once laughed at the Airbus, but we didn't realise what was going to happen. Multinational collaboration was the way forward, but we're not very good at working with others; we weren't really prepared to work with the French. We would have cancelled Concorde had we been able to do so - the French were the drivers all the time, and I admire and envy their approach tremendously."

"When I was at ETPS we had talks by test pilots like Neville Duke, Roly Falk, Peter Twiss, Brian Trubshaw and Roland Beamont, and all of us had ambitions to one day step into their shoes. We didn't realise that the days of an abundance of prototypes were coming to an end, aircraft firms were going to reduce in number, programmes were going to be cut, and the need for test pilots was going to diminish."

Tony Blackman caught the best of it; destined to become Avro's chief test pilot, he helped develop the Shackleton, the Nimrod, the Victor K2, the Vulcan - testing 105 of the 135 that were built - and the HS748, certificating many variants and demonstrating it on some of the world's worst airfields. He was also the first project pilot on the HS146 before the programme was stopped in 1973. These latter aircraft carry confusing designations; they were started by companies which were later forced to amalgamate, and some had three sets of initials in their names at different times. Each change was a little death for the industry and for the aircraft as tradition was lost, expertise squandered, marketing made difficult.

Tony has never had the sort of interest in aviation per se that animates most of us; as a youth he was obsessed with mathematics and the exciting new science of computing. A Cambridge physics graduate, he was called up to do National Service teaching maths and physics to pilots and navigators. "It struck me that at the time a lot of the test pilots had had no chance to have proper technical training, so I joined one of the courses I was teaching, solely with a view to becoming a test pilot," he says. "The older test pilots had a lot of experience of flying, but they didn't have the scientific background to translate that into useful



*Tony Blackman at home in Hamble today with a painting of A.V. Roe's original Hamble airfield*

information for the designers and engineers of increasingly complex aircraft." Test flying became teamwork, and it was no longer tenable for the test pilot to fly the aircraft, then tell the engineers what needed to be done.

"Some great test pilots, like Roly Falk (who hired Tony at Avro) were handicapped because they were so good that they didn't understand that we mere mortals had difficulty putting up with some bad handling feature - their skills masked imperfections which were unacceptable. When you're testing an aircraft that may have to be flown by the world's worst airline pilot, it's an advantage to be less than perfect."

In fact, Tony was almost scrubbed at the ab initio stage because he found landings difficult - he didn't go solo until his 13th hour. But once he'd got the hang of it, he never looked back. From being the worst pilot in the squadron on the Prentice, he became the best on the Harvard, and was sent direct from Ternhill to Germany for front-line conversion onto the Vampire 5 via the Meteor. He performed well enough on the Vampire and Venom to be sent to No 13 ETPS at Farnborough in 1954, and was thought to be the first university graduate on the course, getting a distinguished pass. It was, incidentally, the first ETPS course to feature helicopters, which Tony disliked. "I thought they were bloody dangerous," he says. "I was dead scared that I'd get sent to D Squadron, the helicopter test. I regret now not having done more with helicopters, which are not as unsafe as they were then."

As an RAF acceptance test pilot for the Mk 1 Vulcan, Tony became well-known at Avro, and when Avro won the contract for a titanium steel Mach 3 aircraft designated the 730 he was recruited to do the test flying. The 730 was cancelled at the time of the notorious 1957 White Paper, but Avro had plenty of development projects and Tony was kept busy. Remarkably, he'd gone from maths teacher to Avro test pilot via initial training, Squadron service, ETPS and 18



*The young Tony Blackman climbing into a Harvard*



*Tony Blackman with his predecessor as Avro Chief Test Pilot Jimmy Harrison, and of course the Vulcan*

months at Boscombe Down, in just six years.

It must be somewhat frustrating for men like Tony Blackman to have to hang around while slower mortals are catching up - indeed, he had a reputation for doing more than anyone, faster than anyone. Generally he'd have all four of the Vulcan's engines started before his co-pilot was strapped in; Sir Charles Masefield recalls that on his first Vulcan flight, Tony handed him the controls as the wheels came up, then took out a screwdriver and dismantled the radios. He accepts that patience was never his long suit, nor was he a natural co-pilot. The manner in which test pilots express their opinions firmly can sometimes be taken for arrogance, but it's in the nature of the job to defend an opinion, properly arrived at - that's what they're paid for. They're also required to do the job meticulously, however repetitive, until every base had been covered. Tony recalls that high altitude performance tests in the Vulcan were very tedious and could be ruined by the Pennines 40,000 feet below - runs had to be stabilised at a climb rate of 30 feet per minute with the correct combination of altitude, temperature, power and aircraft weight, and a brief bit of turbulence could upset twenty minutes work.

"Displaying at Farnborough was always a thrill, but demanding because you were often flying near the structural limit and it was important not to offend the flying control committee by going too low or crossing the display line; there was an unfortunate remark going round at the time that you could tell how good a display pilot was by

the angle at which he hit the ground."

The Vulcan had 14 fuel tanks and 14 pumps, and the pilot had a slide rule to help calculate the ever-changing C of G. Tony discovered that it came in handy because if he was flying the aircraft without a co-pilot the only things he couldn't reach from the left seat were the pressurisation switches, but he could poke them on with his slide rule. He couldn't poke them off again, however, so he used to open the small direct vision window to ensure that the aircraft was depressurised on landing. He occasionally flew with a non-pilot, including once with his wife Margaret in the right seat - the first woman ever to do so.

Brian Trubshaw asked Tony to join him for dinner and offered him a job in the Concorde team but he decided to stay with Avros. He did manage to have one flight in Concorde, by swapping with Jock Cochrane for a go in the Vulcan. "I think it was the best landing I ever made," he says. "I got more and more frightened as the speed got lower and lower and nothing seemed to be happening, but they had just resurfaced the runway and we genuinely didn't know I'd landed. I should have quit while I was ahead, but unfortunately I did another one, this time without the auto-throttles, and I found it was much harder to land than the Vulcan."

While test flying the Vulcan, the Valiant, the Victor and innumerable other aircraft, Tony came to the conclusion he was not being mentally stretched and signed up for an economics degree course at Manchester University; unfortunately the Avro 748

programme started after a year and he needed a civilian flying qualification to fly passengers on airliners so he quit economics to do his ATPL by correspondence course. It took only four weeks and he passed with spectacularly high marks. His economics tutor remarked rather grumpily that as a test pilot, 'he had a good brain going to waste'.

It's something of a relief to note that Tony approached VFR flights in a piston single with a certain wide-eyed innocence. When Charles Masefield brought his private Beagle Pup to Woodford, Tony found himself having to prepare carefully for going anywhere, poring over VFR charts, trying to work out how you got to Paris without going through controlled airspace. This strange beast had no ILS, not even a DME, just one VHF set - he crossed the Channel at 5,000 feet, hoping the engine wouldn't fail.

The most surreal episode in his life came in 1973 when Howard Hughes decided to get back into flying, and his factotum Jack Real contacted Hawker Siddeley to have him checked out on the 748. Hughes owned the airline Hughes Airwest, and with visions of landing him as a launch customer for the HS146, Tony arranged to facilitate Hughes's whim. Howard Hughes was already reclusive and fairly loosely hinged, but Tony says: "He was a delightful man, always quiet and courteous. He was lonely and I felt sorry for him - there were a lot of people freeloading at his expense. If he'd been able to bring himself to trust Jack Real rather more, things might have turned out differently."

Hughes and his entourage had taken several



*Tony Blackman after flying a B52.*

floors at the Inn on the Park in London. He arrived at Hatfield via a rear entrance in a blacked-out Daimler which was driven into the hangar, with the doors closed behind it. Tony says: "Hughes was 68 years old, grey and quite frail and unsteady on his feet. He hadn't flown for 13 years and had no licence; he wouldn't put on his shoulder straps but I persuaded him to wear a headset so we had good communication. He took off with me handling the throttles, and we flew to Bitteswell for circuits. He insisted on approaching below the glide slope because, he said, landing anywhere other than at the very start of the runway was 'sloppy flying'. He had lost none of his flying skill since he knew exactly where the ground was but unfortunately it wasn't the piece of ground I had in mind. I took control and put the aircraft so high on downwind that he couldn't undershoot however hard he tried. As it got dark we moved on to East Midlands, where he had red lights showing permanently on the VASIs on his final approaches, then went back to Hatfield where he made a good landing and was justifiably pleased."

Over the following weeks Hughes's unpredictability made for several false starts and much disruption. He next turned up at Hatfield to make a landing in Ostend to renew his visitors permit. There was thick fog, and he had to be taken out via Stansted, where RVR was less than 100 yards, to clear Customs. Tony says: "My marketing instincts got the better of me. I had certificated the 748 autopilot for ILS landings and had done a series of simulator tests establishing the minimum visibility in which it was possible to land an aircraft manually. At Stansted I briefly saw the loom of the approach lights below me at 200 feet and unwisely decided to give it a few more seconds. I saw something ahead, decided I'd better disengage the autopilot and reduce the rate of descent and to my slight surprise found that we were on the ground." The onward flight to Ostend was abandoned after a touch and go and the aircraft returned to Stansted for another, only slightly less blind landing. Three weeks later Hughes was back for a flight in the HS125, one of which he owned; it was a success, and Tony even managed to introduce the topic of buying the 146 for Hughes Airwest. Hughes was interested and

asked to see the mock-up. There was a fourth flight in the 125 to Woodford and Stansted before Hughes was shown over the 146 mock-up at Hatfield. Tony says: "I lent him my jacket because it was cold, and it was given back to me later at the hotel. I kept it for years, realising it was the last jacket he ever wore, then gave it to the Evergreen Aviation Museum where the Spruce Goose is kept."

Howard Hughes fractured his hip getting out of the shower and was never actively involved in aviation thereafter; he died in 1976 on a plane home from Mexico with Jack Real at his side. Tony says: "Many myths have grown around him, and I wasn't happy with the portrayal of him by Leonardo DiCaprio in the film *The Aviator*. If Howard was as bad as he was depicted then, I don't believe that all those years later he would have been the normal, delightful man that I knew."

Tony Blackman also writes aviation fiction - partly, he says, because you can create scenarios and issue warnings that you can't if you stick to history and fact. His works of fiction, *The Final Flight*, *The Right Choice*, *A Flight too Far*, *Flight to St Antony* and *Now You See It*, (see [www.blackmanbooks.co.uk](http://www.blackmanbooks.co.uk)) feature an insurance investigator called Peter Talbert, who goes about troubleshooting after aircraft accidents trying to protect the interest of the pilots, insurers and other interested parties. Meticulously plotted and presented, they cover topics that are difficult to deal with in other ways. *The Right Choice* draws on Tony's experiences of demonstrating the HS748, where a reasonable man might assume that inducements had to be made to help a potential buyer make the right choice of aircraft - yours. "Things are different today, when we have passed laws that outlaw such necessities," he says. Other Blackman books deal with the downside of ETOPS and of taking pilots out of the loop, which Tony says must be guarded against.

"There are dangers in over-automation; nowadays software affects not only the flying controls but also the operation of the electrics, hydraulics, pressurisation and all the other systems. The pilot has to be able to deal with all the malfunctions that will inevitably occur and, because of the sophistication of the flying controls and the systems, the actions to be taken by the pilots are carried on the electronic displays. However, one has to be concerned with the situations that will happen which the designers and regulators haven't catered for, and aren't displayed on the screens. Accidents are generally not due to one fault, but a combination of circumstances. Unbiased accident investigation is vital to ensure that the correct lessons are learnt, not

only on the aircraft concerned but also on the way aircraft are regulated. Sometimes it is too easy to blame the pilots when the fault lies with poor interface with the systems, with modifications not completed or with a host of other reasons."

What does he think of the Multi Crew Pilots Licence, which teaches the 'pilot' no stick and rudder skills but instead gives him or her the knowledge to manage the systems which fly the aircraft? "I would have thought instinctively that the MPL was not a good idea. In terms of the overall cost of things, teaching someone to fly is such a small amount, and however good your systems are, experience of handling asymmetric flight in a small twin is of value."

"There is a challenge here for regulators - technology is being pushed to the limit to improve aircraft efficiency, and at that limit, you must not lower the level of safety. Does it matter how large an aircraft gets? Can you still have just two pilots to operate it safely? The challenge is the management of systems failures. We need a strong regulator, but EASA is responsible to nobody with any technical expertise. Only the FAA keeps EASA on track - because of mutual certification, the FAA will pick up on issues that EASA may have finessed. I don't like EASA not being supervised by an independent body with technical expertise as we did in the UK; history is littered with examples of how organisations behave if they are not being watched."

Tony Blackman no longer flies - indeed, he gave it up when he stopped being a test pilot and joined Smiths Industries to help develop avionics. "I did get some joy out of flying at the beginning," he says, "but if you've been a test pilot you don't quite get the same thrill from GA aircraft. Test flying was a job. I thought I could fly well, but my forte was technical; I became a technical member of the CAA Board. I thought I was too old at fifty - too set in my ways, too resistant to change - so I quit. However I must confess I am looking forward for XH558 arriving at Waddington on July 1st a half century after I delivered it - a great moment for the dedicated team that made it happen, for the people who spent their money supporting the aircraft and, I must confess, for me personally. Long may it carry on flying."



*Tony Blackman in the Spruce Goose*

# REGIONS

## NEW ZEALAND REGION

### *Second South Pacific Safety Management Systems Symposium Queenstown, New Zealand 17-18 February 2010*



UPPER FREEMAN CAPTAIN PETER RHODES (Retd)

One of the most significant steps in the already high standards of safety in the aviation industry has been the introduction by ICAO of Safety Management Systems, (SMS). The New Zealand Region of the Guild of Air Pilots and Air Navigators has been a foundation supporter for the introduction of, and education about, SMS into the New Zealand aviation industry. There have been two SMS symposiums over the last twelve months, the first in March 2009, and the latest being held in Queenstown on 17/18 February 2010. It is important to note that participants were from all parts of the aviation industry: military air and ground crews, airlines, general aviation, maintenance organisations, air traffic services, air navigation services, airport operators, safety analysis organisations, and the Civil Aviation Authority. The role of New Zealand Region of the Guild in both symposia was one of financial assistance and agenda development. This involved working closely with other organising participants namely the Aviation Industry Association of New Zealand and the Royal New Zealand Air Force.

Reference to the ICAO Safety Management Manual is a somewhat daunting experience. The ICAO Safety Management Manual (ICAO DOC 9859 - Second Edition) is available from ICAO for free download, all 265 pages of it! However, it is evident that the ICAO Manual is capable of adaption for all parts of the aviation industry, no matter how big or small. Some presentations at the Queenstown symposium were from very small general aviation organisation with fewer than four aircraft and few staff, while others from airlines and airport operators demonstrated SMS in more complex environments. I have not listed all the expertise making presentations at the New Zealand symposiums but I will summarise the effects of SMS.

SMS is an extension of existing quality assurance programmes that are already in place under the current NZCAA Rules. The existing quality assurance tends to be reactive to safety events, generally from defect reports and safety reports. SMS is a proactive safety management system that requires the involvement of every person, at all levels of the aviation industry, with a developed culture of hazard identification

and the ability to eliminate or minimise that hazard. Smaller organisations of four or five persons may well discuss such hazard identification over morning coffee and adopt a procedure to remove or minimise that hazard. Bigger organisations will need more formalised structures depending on their size. In all cases SMS depends on every person being involved in the safety culture.

The aviation industry in New Zealand will find the introduction of SMS as a logical progression of the quality assurance requirements. However, the NZ Civil Aviation Authority does have some adjustment to make to the Rules. The NZ CAA structure will have to make very clear that the safety and enforcement parts of the Civil Aviation Authority are totally separate as SMS depends totally on a free flow of hazard identification, reporting of defects, risk analysis, and risk minimisation.

The Executive Committee of the New Zealand Region of the Guild of Air Pilots and Air Navigators is to be complimented on its leadership in supporting in such a practical way the introduction of Safety Management Systems in the New Zealand aviation industry. ✈️



## AUSTRALIA REGION

*A QANTAS A380 and the RAAF Roulettes Aerobatic Team provide a spectacular flypast for the Australian Grand Prix*

# EXPLOSION!

BY UPPER FREEMAN CHRIS NICHOLLS

Once again Assistant Chris Ford had excelled himself in his choice of venue for a visit by Guild Members.

On this occasion he had decided that we should get an insight into the history of the Royal Navy at Gosport. So, on Tuesday 23rd March a party of 17 Guild members made their way to Gosport to visit Explosion! - The Museum of Naval Firepower and the Royal Navy Submarine Museum.

We started our visit at the Explosion Museum located at Priddy's Hard. The day started with a short introductory talk by Phil Hazell, one of the Museum management team. He explained that Explosion records the development of naval firepower, the history of Priddy's Hard and the working lives of those who worked there. Its aim is to be the pre-eminent national and international centre of historical expertise in naval warfare.

The museum traces the development of naval armaments from gunpowder to the Exocet missile. It has been created within the 18th century buildings at the Royal Navy's former armaments depot and forms the centrepiece of a 22-acre Heritage Area acquired by Gosport Borough Council from the MoD in 1994. The museum is housed in a group of listed buildings, which centre around the original powder magazine dating back to 1777.

Phil then handed us over to John Coker, a retired senior Royal Navy instructor who is now one of the many volunteers who are essential in the running of a museum such as this. He escorted us on a tour of the Museum Reserve Collection, not normally open to visitors. The collection included numerous examples of naval firepower, the largest being a Polaris Intercontinental Ballistic Missile. John's knowledge of the missile system and operation was amazing, and that was just the bits he was permitted to talk about. It was a sobering reminder of the Cost of Peace.

We then moved on to take in the rest of the museum, starting with an Audio Visual presentation in the Grand Powder Magazine. The Magazine is a very impressive Grade 1 listed building, built of brick, with walls 8-feet thick. It was first used to store gunpowder in 1777 and prior to this the new brickwork needed to dry out for three years until suitable for the storage of gunpowder.

During the 19th century further magazines and buildings were added including the installation of a narrow gauge railway system across the whole site and the construction of piers on the Harbour. The site was altered continuously during the early twentieth century and it was fully utilised during both World Wars when thousands of women workers filled jobs vacated by men on active

service. The site was last used for significant naval activity during the

Falklands Conflict in 1982, and was vacated by RNAD Gosport in 1988 when it relocated to RNAD Frater, further north on the Harbour.

After the AV presentation we were free to explore the other exhibits, but all too soon the time allotted was running out and it was time to conclude the morning with a buffet lunch in the Museum before moving on to the Submarine Museum.

Fort Blockhouse, also known as HMS DOLPHIN until it's decommissioning in 1998, had been the home of the Submarine Service for almost a century.

The Royal Navy Submarine Museum started as a modest 'Submarine Branch Collection' in September 1963. It was housed in three small rooms in the submarine base at HMS DOLPHIN. It has always been run as a charity with one of its objectives being: "To relieve distress or need among past and present members of the Submarine Branch of the Royal Navy and their dependants".

A memorial chapel that was built in 1917 to commemorate all the submariners lost in World War 1 is still preserved on the North Bastion. It is the home of the Book of Remembrance, which lists every submariner lost since 1904. The Museum had slowly expanded over the years but it has only been during the last twelve years, when further redundant buildings were acquired within Fort Blockhouse and new ones built that the Museum has been developed to its present state.

The museums main exhibits are HMS HOLLAND 1 and HMS ALLIANCE.

HMS HOLLAND 1, the Royal Navy's first submarine was built in 1901. Her purpose was to provide coastal defence. Whilst on tow to the breakers yard in 1913 she sank off the coast of Cornwall and was eventually salvaged in 1981. Preventing corrosion from destroying the hull was a major task and since 2001 she has been housed in a purpose built, environmentally controlled, building funded by the Heritage Lottery Fund.

The highlight of the day had to be our escorted tour of HMS ALLIANCE, the centrepiece of the museum. Our guide for the tour was Paul Cubitt, a retired submariner who had seen service on the boat and is now a volunteer guide.

ALLIANCE is an A-Class, diesel electric submarine, one of 14 built at the Vickers Armstrong yard at Barrow-in-Furness. She was launched in 1945, too late for war service. In 1958 she was modernized when her role changed from surface ship hunter to



Going ashore from HMS Alliance

that of sub hunter. She was decommissioned in 1973, after 28 years, and became part of the museum collection in 1978. During our tour through the boat Paul bought the experience to life with his anecdotes of life on board. Whilst in the control room our experience was enlivened with the "special effects". The lights dimmed to a red glow and the klaxon wailed to signal "Diving Stations."



Interior, HMS Holland 1



HMS Alliance, firmly attached to terra firma.


We then heard the "pinging" of the sonar and the increasing propeller noise from a surface hunter, closely followed by the deafening noise of a volley of depth charges! It must have been a terrifying experience for Submariners who experienced attacks such as this during the War but for us the lights then came up and we continued with our tour.

We then moved on to the Engine Room and whilst admiring the two huge supercharged diesel engines Paul once again used the audio effects, this time to demonstrate to us the noise level that would have been experienced from just one of the engines in a confined space, very, very loud!

All too soon our tour was over and after expressing our thanks to Paul we were able to have a quick look at some of the other exhibits before it was time to depart our separate ways. It had been a most interesting day and, as is so often the case with museum visits, there is never quite enough time.

If you would like to find out more about these Museums they both have good web sites and are well worth a visit.

<http://www.explosion.org.uk>

<http://www.rnsubmus.co.uk> 

# TECHNICAL AND AIR SAFETY COMMITTEE REPORT

PAST MASTER

CAPTAIN CHRIS HODGKINSON

TECHNICAL DIRECTOR


**DIARY DATES** - AeroExpo at Wycombe Air Park from 25 -27 June where the Guild will have a stand, normally in the right hand hanger, and the LAA Sywell Rally from 3 - 5 SEPT. Details of both can be found on the respective websites.

**GLASS COCKPITS** - fewer accidents, more fatalities. A two-year study by the US NTSB reveals that a target group of light general aviation aircraft with digital "glass cockpits" had twice the fatal accident rate compared with aircraft with traditional cockpits using "steam gauge" analogue instruments, prompting calls for better training and error reporting. These crashes were typically linked to IFR rules business or personal flights while conventional cockpit crashes were more likely to be used in training - the NTSB says it believes the data is "representative of a true effect", meaning that there had been no "significant improvement" in safety with the glass cockpits.

**NEW GROUP DIRECTOR SAFETY CAA** - Gretchen Burrett took over as GDSRG on 1 April 2010. Latterly with NATS as Group Director Safety, she trained initially with the USAF where she qualified as a pilot and has specialised in safety.

**8.33 kHz RADIO SPACING** - The EC has decided to mandate the use of 8.33 kHz radio spacing at all levels across Europe. New aircraft must be equipped by 2012 and the retro fitting to existing aircraft will commence within eight years

**NATMAC (National Air Traffic Management Advisory Committee) VOLUNTEER REQUIRED** - The Guild's nominee Terry Gill wishes to stand down after many years in post on this interesting and important committee which meets in London just twice a year. Google NATMAC for information.

**FLARM** - This excellent reasonably priced product which we brought to your attention in an earlier Guild News, and was initially designed originally for gliders, has grown into PowerFLARM, to be launched in May 2010. This version is for powered and faster GA aircraft incorporating ADS-B, a transponder as well as an active and passive FLARM module. There is a helicopter version as well. 

# Gazette

APPROVED BY THE COURT ON 13th MAY 2010

## ADMISSIONS

As Upper Freeman

Captain Alistair Thomas BEATON (CAN)

Captain Peter Lawrence CHANDLER (OS)

Adrian John DAVY

Captain Trevor Albert DAWSON (OS)

Peter EVANS (CAN)

Captain John Magee FROELICH

Commander Keith William GILCHRIST (NZ)

Captain John Anthony HALL (HK)

Lieutenant Commander Simon Richard HARLOW

Richard Brian JOHNSON

Captain John MASON

Captain Norman McDONALD (NZ)

Squadron Leader Simon Edward READE

Captain Robert Anthony SCOTT (CAN)

Captain Graham David STOKES

Jeremy Pettican TRACY (CAN)

As Freeman

Howard William COOK

Peter Gordon DOBSON

Hendra MAHENDRA (HK)

Colin Francis SACH

As Associate

Paul James ANDERSON (GYM)

Stuart Gordon BOOTH (GYM)

Joel BRAUN (CAN)

Alexander COLCOMBE (CAN)

Tobias Philip CROSS (CAN)

Megan Cecelia EVERS (CAN)

Joshua Morris FARLEIGH (GYM)

Max Baillie FRASER (CAN)

Connor GRAHAM (CAN)

Daniel Charles HARTMAN (CAN)

Patrick Michael HILL (AUS)

Wissam Jerry JELLALI (CAN)

Roshan Anselm JOSEPH (CAN)

Mathew JUREWICZ (CAN)

Andy A KALIRAI (CAN)

Michael Justin LABRECHE (CAN)

Matthew Alexander LEE (CAN)

Jordan John LESLIE (CAN)

Nicholas Daniel MARTIN (CAN)

Andrew Frazer MILNE (GYM)

Dr Robert Andrew PERRETT (GYM)

Kevin Matthew TOWNSEND (CAN)

Andrew John WHITE (GYM)

William Andrew James WILLIS (GYM)

Emma WORLEY (GYM)

ACKNOWLEDGED BY THE COURT 13 May 2010

REGRADE

To Livery

George James Carrick CAPON

Francis William CHAPMAN

Squadron Leader Alexander Nicholas GOODWYN

Francis Paul SMIDDY

RESIGNATIONS

Joseph Christopher AYRES (HK)

Jonathan Alexander CURD

Rodney Brian Antonio HALL (NZ)

Brian John HOLLIDAY

Gavin Campbell TRETHERWEY (NZ)

Russell Eric WILLIAMS

FORFEIT ALL BENEFITS

Caroline Norma BERRY

Shanna BRYMAN (OS)

Dr David BRYMAN (OS)

Blair Michael CLUBLEY

Captain Ian Francis CORBY (OS)

Commander Mark B DAVIES

Captain Paul ELMER

Jonathan Daniel FYNE

Raymond JONES

Lieutenant Commander Patrick Charles LAINE (OS)

Commander David Paul MARKERT

Captain Victor PEIRCE

Vern RABURN (OS)

Geoffrey WANT

Squadron Leader Paul Edward WEBSTER

Captain Leon WHELCHER (OS)

## Clerk's column

PAUL TACON *Learned Clerk*

### Archive Material

The Guild is soon to start work on additional capacity for the collation, recording and storage of archive material. As members may be aware, the Guild has a growing collection of books and other aviation archive material which is currently displayed in the Archive Room at Cobham House. However, appropriate storage and proper recording of existing and new material is required. The new storage capacity will also expand the Guild's ability to take in more material of both historic and general interest.

If any members have, or know of others (members or otherwise) who have historic aviation material, which they would like the Guild to retain for preservation and display, please contact either the Guild office or the Hon Archivist, Assistant Gerald Hackemer.


### Guild History

The impressive volume of the Guild's History for the years from 1965 to 2004 is nearing publication. This very attractive book, with many colour (and black and white) photographs throughout is a very interesting and readable account of the Guild during the period spanned. Surely, a 'must have' for all enthusiastic Guild members! It

will be (or should be) shortly available for ordering from the Guild office. Further details of price and date of availability will be published on the website as soon as they are confirmed.

### Cape Challenge Attempt

As many members may by now be aware, unfortunately, and very disappointingly for Upper Freeman Capt Steve Noujaim, his attempt on the Cape Challenge had to be postponed only several days before the intended departure date (a few weeks ago). In the days immediately prior to departure, the team's supply of avgas in Pointe Noire became unavailable and the best offer that the team could renegotiate at the last minute from a local entrepreneur was for 1,000 litres to be delivered to Pointe Noire for \$20,000, the equivalent of £12.50 per litre! As this was by no means absolutely secure, it was decided that it would be an irresponsible waste of sponsors' money to accept it, particularly at such short notice.

The next window of opportunity to make the flight is dictated by the Inter Tropical Convergence Zone weather and will be in September/October. Steve and his support team, headed by Liveryman Martin Barraclough, have expressed huge thanks to all Guild members for their support and sponsorship - your funds are safe and ready to use for the flight a few months time. 

# THE 2010 COBHAM LECTURE

## THE BATTLE OF BRITAIN, 70 YEARS ON

### "AN EXTRAORDINARY PASSAGE OF ARMS"

*The Master, Dr M A Fopp*

*Assistant Group Captain Tom Eeles*


**T**he 2010 Cobham Lecture took place on 28th April in the Royal Aeronautical Society's Boeing Theatre. The Master of the Guild, Dr Michael Fopp, spoke on 'The Battle of Britain, 70 Years On' in front of a distinguished audience, including HRH Prince Michael of Kent, Lord Beaverbrook, Lady Cobham and members of no fewer than 27 City Livery Companies who filled the auditorium to capacity.

Rather than describe the Battle in chronological order, the Master explained that he would outline a variety of aspects of the Battle as seen through both contemporary and modern viewpoints. He remarked that it was the first battle to be named before it officially started on 10th July 1940 and to have victory declared before it finished on 31st October 1940. He showed some film clips dating from the 1950s and 60s, portraying the Battle as seen in popular imagination after the War, contrasting these with some more contemporary film footage dating from 1943 which actually showed men who had participated in the Battle. The Battle was, he said, "an extraordinary passage of arms", that the British, against all the odds, supposed they could win. He described the preparations for air defence, undertaken by Air Marshals Dowding and Park, including the development of RDF, or radar as it was subsequently known, and the control system developed alongside it, the functioning of which was never properly understood by the Luftwaffe. As an aside, he mentioned the invention of the Identification Friend or Foe device (IFF), code named Pipsqueak, which gave rise to the well known aviation terminology still used today with transponders, namely "Confirm you are squawking..." Of particular interest were the recorded views of various Battle participants, Adolf Galland, Bob Stanford Tuck and the Master's father Desmond Fopp, who was shot down in flames and who did not recover his sight for 3 months. The technical improvements introduced by the RAF after

Dunkirk, such as variable pitch propellers, high octane aviation fuel and armour plate made a significant contribution to Fighter Command's effectiveness, as also did Lord Beaverbrook's activities as Minister for Aircraft Production, and the Civil Repair Organisation, which managed to return 61% of the aircraft wrecks sent to it to front line service. He also covered such diverse aspects of the Battle as the start of the Atlantic ferry flights, the differences between British and German fighter guns and ammunition, and the exceptional work of the RAF groundcrews who laboured long hours to turn round and repair fighter aircraft every night for the next day's fighting.

The Master also covered the less well known subject of the flying clothing and safety equipment used in the Battle, calling upon the services of his son Chris (a current RAF officer) as a mannequin to give a live demonstration of what a typical fighter pilot of the period would be expected to wear. Over the top of his rather thick no1 RAF uniform (including shirt and tie) he would don a heavy fur lined Irvin jacket, a 'Mae West' lifejacket (coloured green and requiring inflation by mouth only), thick gauntlets and a flying helmet incorporating a rather primitive canvas oxygen mask which was prone to leak. It was a graphic demonstration of the discomfort a pilot faced before he had even got airborne. German equipment, by comparison, was vastly superior and German lifejackets were much prized items amongst RAF aircrew. The British arrangements for the rescue of downed pilots were haphazard, to say the least. There was no established Air Sea Rescue organisation and pilots who landed in the Channel had to hope that they would be picked up by a passing ship, fishing boat or a lifeboat of the RNLI, before they succumbed to the chill waters and died of hypothermia. Richard Hillary's description of his rescue in 'The Last Enemy' gives a graphic account of the struggle facing a British pilot, badly

burnt, fighting for survival in a very hostile environment. German arrangements were again much better, including a series of moored floating refuges and float planes specifically tasked with rescuing downed pilots. Despite their prominently painted red cross markings these were thought also to be used for intelligence gathering so were regularly attacked by the RAF.

In his final summary, the Master observed that of 'The Few', numbering some 3000 persons, 520 were killed in action during the Battle. Bomber and Coastal Command losses over the same period were considerably more. By the end of the war a further 790 had lost their lives. At the time, he said, it was an unreal world, hard for us today to imagine what it was like. His final recording of his father's reminiscences of the Battle was particularly moving. Following the presentation the questions flowed thick and fast, eventually the proceedings were terminated and attendees retired to the terrace for drinks and canapes on a warm spring evening that seemed thousands of years away from what had just been described. 



# THOSE WERE THE DAYS

## A PILOT OFFICER'S DIARY 1929

UPPER FREEMAN IAIN TULLOCH

Some years after my father died a cardboard box with the last of his papers was given to me.

It was some time before I bothered to look inside a battered savings book from the Royal Bank of Australia. My father did not die a rich man, he had spent far too much time living like one for that. So rather than columns of pounds shillings and pence the bankbook contained a diary for the year 1929. He was 21, had just begun flying in the RAAF at Point Cook, and would soon leave Australia to take up a commission in the RAF. He was not to return for nearly 30 years.

Rather than taking extracts in chronological order, it may be more interesting to highlight certain passages and then read a little between the lines.

Let us begin with something of a classic squadron outing. My father was posted to 32 Squadron based at Kenley and here is his entry for 10th December 1929.

*Tuesday 10th. Wilson and I went to Northolt, Halton Bicester, Upper Heyford, Cardington. Ran short of petrol and landed at CFS. Went to Grantham for lunch. Left at 2.30. Shot up Easton on the Green, got lost in fog. Flew low to read name on railway station "Knebworth". Landed in a field and enquired the way. Got no satisfaction. Took off again. Landed again and enquired the way. Very bad field. Another machine landed beside me, lost too. Wilson landed in another field. We were only 1 1/2 miles from N. Weald. Parked our machines there and went to town. Flight of 29 Sqdn machines lost. 2 landed in the dark and turned over and crashed. The other was OK. Wilson and I went and saw Kathleen in Gt Portland St. then called for Bridget Chapman and took her to Cadogan Gardens for dinner. Lady Wilson was out. Sir Matthew was away. We slept there and left at 7 next morning.*

All in a day's work! Bearing in mind that the Siskin was an open cockpit single seat fighter the social outings were obviously not suitable for flying suit and goggles. The aviators must have carried a reasonably civilised change of kit, particularly when dining in Cadogan Gardens. The effortless manner in which they arrive in Gt. Portland St. says much for the efficiency of public transport 80 years ago. Establishing position by reading the names of railway stations is mentioned in an earlier entry during RAAF training at Pt Cook.

*Friday 8th March Flew to Nhill. Very low clouds over the mountains. Tamlyon crashed at Ballan. Passed Harding at Ararat, he lost himself soon after. Mistook Stawell for Murtoa but discovered mistake by flying low and looking at name on railway station. Arrived at Nhill. Griffin got lost and finished at Yanee. Flew back to Point Cook after flying*

*low over the town. Went up to town with Dermot and went to clothing factory and then to Evans'. Retired early.*

Note the similar navigational technique and the similar trail of destruction. However at this stage my father was too early in his course to be capable of taking a girlfriend out to dinner afterwards. Nine months later the intensive RAF training had prepared him for such possibilities.

No mention of the great stock market crash of 1929 is made in the diary, but as can be seen there were plenty of others going on. The matter of fact way in which they are mentioned suggests that they were not uncommon and that most pilots survived them. However, there were casualties.

*Wednesday 14th August. Jones was killed today at Sutton Bridge. He stalled on a turn near the ground. Everyone is cut up. Gulliver left by air to attend the Court of Enquiry. I was O.O.*

This classic flying accident was much rarer than the relatively frequent heavy landings. Some of these were clearly due to reduced visibility whether because of low cloud or nightfall. Night flying was something of a black art but it was practised when conditions allowed. Here is an interesting entry regarding the night training route.

*Thursday 13th June. Went over to Northolt with Coleman using R/T. We landed there, saw Sammy and the R/T people, pushed off again and returned to Kenley. In the afternoon Roman and I went over the city. He showed me his night flying route. Marble Arch, Vauxhall Bridge, Clapham Common and repeat. We came home, I landed then he broke the undercarriage and wing. I played him tennis in the afternoon (8 sets). Played bridge in the evening with Doc Atteridge, Capt McClare and the Roman. Doc paid for the party.*

The use of R/T over central London appears to be something of a novelty. Yet another bent aircraft is handed over to the riggers. The night flying route is obviously chosen for visual landmarks and I recall my father telling me that they generally flew it around 1000 feet agl. Remember that we are talking about single engine open cockpit biplanes. If there was an Air Navigation Order in 1929 32 Sqn were not paying much attention to it. It must have been a very scenic route. Still on the subject of night flying an entry on 15th July caught my eye.

*Monday 15th July. Flew. Went to Richmond Park at night with flares, arrived home at 2.30 the next morning.*

That would suggest that Richmond Park was used as a landing site! There is no mention of landing fees, let alone a Congestion Charge. Unplanned night flying was another matter however.

*Thursday 5th dec Wet and windy. Colman went back at 3 with Wilson Barnes and Fell. Barnes was kept because it was too late, and Wilson and Fell landed in the dark. There was a great panic on, Croydon Neon was lit and flares were going out.*

What was "Croydon Neon"? Presumably a night visual aid for Imperial Airways who were based there. Landing in fog also caused some local difficulty.

*Thursday 14th Nov. Bad day. Very foggy. Several machines had difficulty in landing. Richard broke his U/C when landing.*

Another common theme is the forced landing. Interestingly there is no mention of engine failures in the diary, so although they were practised they were not the principal reason for landing in fields. Fuel starvation or being lost were more likely causes. Here is an example on 27th June.

*Thursday 27th June. Coleman and I pushed off at 4.30 for Upavon via Eastchurch, Manston, Hawkinge and Tangmere. My petrol ran out at Ford aerodrome near Bognor and I had to land. I landed in a cabbage patch and was surrounded by kids in no time. There must have been 150 of them. They all spoke with a peculiar accent. Coleman landed in the next field and came to see what was the matter. He then flew on to Tangmere to get petrol. After 1 hour he returned in a tender with 30 galls of pink gin. We filled up and I took off and flew to Tangmere. We left Tangmere at 9.5 and arrive home at 9.40 just as it was getting dark.*

A newly arrived Australian was always going to have communication problems with country children from Sussex. Undaunted he tries the same route next day.

*Friday 28th June. Trench Williams and I flew round the same course as Coleman and I flew yesterday to find the endurance of 61. Trollup and I went into Croydon at night to the Davis Theatre, a beautiful place. I lost 10/- which I recovered later on. Annual sports in the afternoon.*

It would seem that the fuel gauges were not very reliable or easy to read. However it does appear that '61' completed the course without mishap. No board of enquiry is reported as having come to any obvious conclusion. When all else failed the parachute had to be used.

*Thursday 7th Nov. Collins and Sgt White collided over Wallington. Both jumped in parachutes. Quite OK.*

Where the machines ended up is not recorded. The residents of Wallington had already complained about noise, so presumably the parachutists were considered an improvement!

This might be a good point to come down to earth and look at some of the social aspects of life in the RAF of the 20s. One question

that arises from all the socialising is how someone just arrived from Australia could know so many people in England. The answer is almost certainly that the sea voyage from 13th April to 21st of May was an ideal opportunity to make friends. Here is an account of one of the many parties on board.

*Monday 13th May. Everyone is busy with their fancy dresses. Mrs Kirby offered me one "Patches". I took it up. Hilda Hyde did me up as a girl with curls, dark eyes, pretty lips etc & I was a most beautiful creature. Everyone remarked on it. I fooled everyone at dinner and no one knew me. I won a prize for the best fancy dress. Joyce went as an early Victorian lady. Mrs King won a prize as a French Pierrot in a very flimsy dress. The dresses on the whole were excellent.*

Now who suggested that fighter pilots have a tendency to fancy themselves? Two days after landing at Southampton my father is already calling on a family in London who presumably were passengers on the ship. By the end of the month he was already at home in the big city.

*Thursday 30th May. Polling day. General elections for the British Parliament. Everyone arguing on this and that and in favour or against the parties. Frith, Sam, Griff and I went to town for try on of uniforms. I went out to Nottinghill Gate but found Miss McLennan out. I left my card, returned to the city, met Sam at Piccadilly Circus, had tea at Lyons, went to the "Singing fool" at the "Astoria" and returned to Uxbridge.*

The general election mentioned was the "flapper election" where women under 30 had the vote for the first time. Perhaps Miss McLennan was exercising her democratic rights.

Moving around town seems effortless using public transport. His report of a tour by car also looks easy compared to what would be the case today.

*Saturday 1st June. Klein called at 11 and we went for a tour in his baby Austin. Windsor Castle and the Coldstream Guards, Eton, Staines, Whitehall, The Cenotaph, Air Force Memorial, Tower Bridge, Croydon and Kenley. Kenley is charmingly situated on the top of a hill. Country houses line the road on either side of the ascent. Aerodrome is bigger than Point Cook, Quarters are luxurious. Boy it's good! Caught train at West Croydon for Uxbridge.*

The young officer is clearly delighted at the standard of his accommodation. Sporting facilities also turned out to be to his liking. Seven games of tennis were played in two weeks shortly after arriving at Uxbridge. Tandridge golf club also features once he is stationed at Kenley. Even skiing is mentioned in an entry which also demonstrates the social energy of the squadron pilots.

*Friday 11th Oct. I have put in for a course of skiing to be held at High Tetra in Czecks Slovakia (sic) in February. McD and I called on Roman. Ferdie Swain Rawley McDougall and myself went into Croydon for a quiet evening. We went to Battys, then the Davis, then decided to go to London. We got to the*

*Piccadilly Club about 11.20 and saw a Cabaret, had a few drinks. Rowley danced with one of the Cabaret girls and we pushed off at 1 o'clock. Ferdie stayed to see his Jane who was to arrive at 1.15.*

Eventually the expanding social horizons began to suggest something better than public transport.

*Friday 2nd August. ---- I went up to town in the afternoon to look at a few motor cars. I saw one at Clapham for 39 pounds cash. (Rover Spts 2 Str). Rather dilapidated, but good engine and fairly cheap. Bartlett at Nottinghill Gate has a beauty for 59 pounds light blue with aluminium bonnet, a very pretty thing. I think I will sell my Underground Shares and buy it.*

It is interesting to compare his car journey from Kenley to the gunnery camp at Sutton Bridge (near Kings Lynn) with what would be possible today.

*Monday 2nd Sept. Started for Sutton Bridge at 6.40am. Got to London Bridge quite easily and through the metrop quite OK. Ran out of oil in Cambridge and the generator refused to charge at Ely. Arrived at SB at 1210 after getting lost in Wisbech. Cruised along at 40-45mph and the car went very well. No punctures or events. Flew in the afternoon and got 57%. Quite OK.*

Flying and socialising were not entirely unrelated. They came together on the numerous occasions when the homes of various friends were "shot up". Considering that many of these establishments were in the more prosperous suburbs of London it certainly must have been a more tolerant age.

*Friday 16th August. I am O.O. Flew on the patrol at Biggin Hill in the afternoon. Shot up the Craigies when I came back.*

*Friday 6th December Wilson and I went to Bircham Newton. Shot up Wilsons place at Thetford and Duxford. Left Bircham at 12 after I had lived in the place and arrived here at 1.30*

*Tuesday 16th July. Shot up the Hardings in the morning, went up to town and played tennis at the Johnstones in the evening. Left my racquet on a bus!*

*Monday 14th Oct. Flew for the first time for a month. Went over and "shot up" the Hardings.*

*Wednesday 16th Oct. Went over and saw Winifred by air at least I think it was Westcott I visited.*

Winifred does not appear in the diary again, so perhaps he never found the right spot!

The only recorded noise complaint is when the whole squadron overflies Upper Wallington. Later these residents would be welcoming two parachutists after a mid-air



*The Siskin was the RAF's first all metal fighter and served as its main fighter aircraft from 1924 to 1932*

collision.

*Friday 21st June. The Squadron arrived safely at 7.45 pm after flying low over upper Wallington to the annoyance of the residents there who phoned me and complained. Brutus stepped out of Ferdie Swain's top window at night. 20 ft drop.*


Brutus was clearly a resilient character. He is mentioned in despatches again during a guest night.

*Wednesday 31st July. Flying at night was washed out because of bad weather. Guest night. The prince of Greece was down also Ellington, Scarlett, McDonald from Uxbridge and a lot of other heads. Music supplied by Airman's band from the gallery. Dinner took a long time. We started at 8.30 and finished at 10.30. The Brigadier General was bottled. Scarlett did not leave till midnight and appeared to enjoy himself. There were 10 representatives of the R Engineers across and they were bottled when they returned to their camp. Bobbie Stowell injured his eye and had to go to Uxbridge Hospital. Brutus spilt a quantity of blood in the hall but did not hurt himself.*

The year 1929 lies almost exactly between the two World Wars. My father's first station commander was Gp Capt Rees VC who would have been 45 years old at the time. Here is his description.

*Wednesday 22nd May. Met the CO Gp Capt Rees VC, OBE, MC, AFC. Very cheery old soul.*

Only a 21 year old Pilot Officer could make a 45 year old RFC veteran sound like a Chelsea pensioner. It would have been hard to imagine that 10 years later these carefree youths needed to plan for another World War where air power was no longer a sideshow. The Air Force grew beyond recognition. Nothing would be the same again.

My father loved flying, but above all he loved flying biplanes. An approach without a good sideslip was really rather boring. Many years later his pride and joy was a Dragon Rapide which he flew all over Europe with the family. In the reserve he would spend an enjoyable couple of weeks in Germany each year. There he was checked out on the Meteor, but his verdict on jets was scathing; "Absolutely no feel, like driving a tram! Not like flying before the War. Those were the days!" I can see what he meant. 

# Michael Wheatley Award

Michael Wheatley Award for "Outstanding services to the Business and General Aviation industry".



**A**t the annual British Business and General Aviation Association conference held in March 2010, Assistant John Robinson was presented with the Michael Wheatley Award. This prestigious award is made annually for outstanding services to the business and general aviation industry.

John began his career in business aviation, something he had always wanted to do after leaving the RAF, in November 1978 when he was recruited by McAlpine Aviation at Luton Airport to fly the HS 125. Within a year of joining the Company he was made a training captain on 125s. At the time the company was operating 24 of these aircraft as well as a Lear 35 and Citation 1; it also had several propeller type aircraft. His initial responsibility was to write the Company's Standard Operating Procedures; somehow it had been operating without any! Seven months later he was promoted to Jet Fleet Captain and then became Chief Pilot in 1985. When McAlpine was bought by GEC in 1989 John was appointed Director of Flight Operations and he combined this duty with that of Chief Pilot; the Company was renamed Magec Aviation. The Company was the first business jet company to be approved for a round-the-World Air Operator's Certificate, so spreading the flying operations beyond the previously flown European, African and Middle East regions. His trips took him as far West as Acapulco and East as far as Djakarta with many through Africa, the Middle East, the Caribbean and the USA. He was instrumental in seeing the 800 and 1000 series of the 125 into service with the Company and was fully rated on all the series from the 1 to the 1000. The operating range of the 1 was 1000 nm and the 1000, 3400 nm. The difference in the ranges also reflected the difference of the avionics equipment and power plants. During his 18 years flying business jets John spent much time training pilots of various nationalities in such countries as Gabon, Spain, Kuwait, Nigeria and Romania. Some of the business aircraft types that he flew besides the BAe/HS 125 were Astra SP, Falcon 900 and 2000, Gulfstream 3 and 4, Cessna Citations, Challenger, Mitsubishi MU 2, Cheyenne, Conquest and Kingair.

He represented the Company initially on the Air Taxi Operators Association before this was amalgamated with the General Aviation Manufacturers and Traders Association (GAMTA) and the Business Aviation Users Association (BAUA) and ultimately when these two associations were amalgamated, the British Business and General Aviation Association (BBGA). He was the business aviation expert on the UK Confidential Human Factors Incident Reporting

Programme (CHIRP) Advisory Board, a member of the Airworthiness Requirements Board, GAMTA's representative on the CAA's All Weather Operations Committee (AWOC) and the CAA's JAR-OPS Implementation Working Group and was appointed to the UK Reduced Vertical Separation Minima Steering Group on behalf of GAMTA and BAUA. He was a member of the Business Aviation Safety Partnership on behalf of BBGA. In 1995 he was made a Fellow of the Royal Aeronautical Society and served on its Flight Operations Group for three years.

John retired from Magec Aviation in April 1996, having flown 14800 hours of which 6500 were on 125s, and joined GAMTA as its flight operations specialist. For the next 13 years he was secretary to the Flight Operations Committee. He drafted a paper on the Technical Requirements for Business Aviation Aircraft that had become necessary with the many new equipment and procedure requirements that were being made by the various authorities at that time. This became a living document and was regularly updated with the many changes that constantly took place. John retired from active involvement with Business Aviation in March 2010 but still retains a watching brief on current happenings.

Prior to moving into Business Aviation, and after leaving the RAF at the end of 1974, John joined the UK Civil Aviation Authority, initially as an Operations Officer in the then Directorate of Flight Safety before becoming a Flight Examiner with the Civil Aviation Flying Unit. His duties included examining pilots for the initial issue of their instrument rating, general flying tests for the issue of professional and private pilots licences, aircraft type ratings, flying instructor examinations both for initial issue and renewal and sampling the standards of students at the various flying schools. During his time on the Unit he converted to the HS 748 that was used for passenger transport purposes.

In 1975 John joined GAPAN and soon became involved in the then Training Committee. He was Chairman from 1984 to 1988 and then moved to the Technical and Air Safety Committee in 1996 where he became Chairman from 2003 to 2006. He became a Liveryman in 1985 and was elected Assistant to the Court in 1993. In 1998 John was appointed to the Benevolent Fund Board as Treasurer and in January 2010 became Chairman. He founded the Guild Luncheon Club in 2000 and handed this over in 2008. John was co-author of the joint GAPAN/RAeS paper entitled 'The Future Flight Deck' for which he was awarded the Master's Commendation. He was awarded the Master Air Pilots Certificate in 1985 and in 2004 the Guild's Award of Merit.

John began his flying career when he joined the Royal Air Force in May 1952. After flying training on Prentices, Harvards and Meteors he flew Canberras on various assignments. These included the Main Force on 44 Squadron at Cottesmore and Honington, with 76 Squadron the A and H-Bomb tests in Australia and Christmas Island and afterwards with 542/21 Squadrons on nuclear background surveys. He then moved on training night fighter navigator radar operators on the Canberra T11, also flying Meteor NF14s as targets, on 228 OCU at Leeming latterly as a training pilot and instrument rating examiner and finally as the Command Instrument Rating Examiner for RAF Germany based at Wildenrath. Here he became the Station Flight Safety Officer and Unit Test Pilot mainly on the Canberra PR7 and B(I)8 but also Meteor T7 and F8 that were used for target towing purposes. John also had to stand in for the OC Flying at Gatow flying the Chipmunks around East Germany. He was checked out on the Pembroke C1 and flew with the Army Air Corps on the Beaver. In February 1964 he attended the Jet Provost flying instructors' course at the Central Flying School (CFS) and after an instructional tour as a flight commander at 7 FTS Church Fenton, he returned to CFS at Little Rissington as a staff instructor and gained his A1 instructor's category. While at CFS he established Training Flight to standardise the staff QFIs and led the Red Pelicans formation aerobatic team. When the Jet Provost T5 entered service he wrote the amendments to the instructors' manual for this aircraft in conjunction with Examining Wing. John was checked out on the Gnat T1, Varsity T1 and Sioux HT1 helicopter achieving all of 1 hour 30 minutes solo time on this! He was awarded the Air Force Cross during this tour and in 1970 was promoted and posted to the RAF College at Cranwell as OC Headquarters Squadron with responsibilities for the standards of all flying staff and students, the ground school and editing the College Air Staff Instructions and the Unit Flying Order Book. He was deputy QFI for the flying training of HRH the Prince of Wales and conducted the Prince's refresher training in 1972. He led the Poachers, the RAF College's formation aerobatic team for 3 years and was awarded the Bar to his Air Force Cross. John retired from the RAF at the end of 1974.



# THE GUILD AND CENTRAL FLYING SCHOOL SENIOR FLYING INSTRUCTORS FORUM

HELD AT RAF CRANWELL ON THURSDAY 15 APRIL 2010

LIVERYMAN SQUADRON LEADER NICK GOODWYN

The fourth Senior Flying Instructors Forum was held in College Hall, RAF Cranwell on Thursday 15 April 2010. This biennial event, held jointly between the Guild and the Central Flying School is organised by the Instructors Sub Committee of the E&TC, with kind permission of the Commandant RAF College and is service-sponsored by Commandant CFS. This year, the Forum attracted over 100 CFIs and Senior Flying Instructors from across the UK with the aim of the day being to engender, through guest speakers and an open Q&A session, debate and conversation on topics affecting career flying instructors and hopefully promoting excellence and standardisation in flying, mostly focusing on light aircraft, PPL and PPL (H) training.

The Commandant RAF College gave a warm welcome before the opportunity was taken by the Master of the Guild to present Poignards from GAPAN each to Commandant RAF College and to Commandant CFS in recognition for hosting this Forum since its inception. The Master also had the great pleasure of presenting a Master Air Navigators Certificate to Flt Lt Bill Williams, CFS for his career as a V Bomber, Tornado and Instructor Navigator as well as in his current role as lead Navigator on the BBMF.

Commandant CFS then opened the Forum, which was once again ably steered through the day by Liveryman Malcolm Hunt. The first presentation was on Aircrew Human Performance Coaching by Sqn Ldr Ade Rycroft of the CFS Human Factors Training Squadron, who explained how RAF student aircrew are now able to be coached to enhance their capacity and ability to achieve the high standards demanded by modern 4th and 5th generation aircraft. Next, Capt Dave Riley from the CAA Staff Examiners Panel gave a presentation on Single pilot Resource Management and Threat Error Management, giving his views on how this training should be delivered and incorporated by instructors

into current training practises. This was a well thought and structured piece which, as with the Performance Coaching, provoked some lively questions in response. The morning session was concluded by Mike Watt from the Guild and Cabair, and based on several years of research he has undertaken on adult learning styles in relation to flying training. This was a delightfully and enthusiastically presented subject which provided an intriguing counterpoint to other methods in delivering quality education in aviation.

Lunch allowed for extended conversation and networking amongst the attendees and thanks go to Pooleys Flight Equipment who very generously provided all the refreshments (through the excellent College Hall staff) and complementary folders for the Forum.

The afternoon session began with a study into Effective Lookout in Light Aircraft by Sqn Ldr Dave Rae. This work was as a consequence of the tragic loss of 2 RAF Tutors in a mid air last year and gave an insight into the meticulous investigation that had taken place and how we can learn and understand the limitations of the human eye but also use that knowledge to achieve effective lookout in the GA environment, complemented and assisted by developing technologies such as TCAS and by proper use of ATC services. Mike O'Donoghue, then gave an insight into the work of GASCo, of which he is CE, before giving a varied insight into the issues currently influencing rotary flying training and instruction. It was clear that there are many consistencies between the fixed wing and rotary training worlds. The last of the speakers was Warden Dorothy Pooley, Chairman of the E&TC who explained the role of the Guild and the E&TC in promoting awareness of the plight of the career flying instructor and also the work being undertaken by the Guild, in response to the Strategic review, in all areas of flying training. Malcolm Hunt then chaired the plenary session where the audience was invited to raise any issues or thoughts with the speakers. As in the past,



The Master presents the Commandant, RAF College Cranwell, with the Guild's Poignard.



The Master presents Commandant CFS with the Guild's Poignard.



The Master presents Flt Lt Williams with his Master Air Navigator Certificate.

this proved to engender a lively and animated discussion ranging over regulatory and technical debates. The Forum was brought to a close with a summary address by the Master of the Guild.

Despite the unfolding crisis of volcanic ash during the day which left those who had flown into Cranwell stranded, the Forum once again succeeded in bringing together Senior Flying instructors from across the UK in the historical and impressive RAF College Hall, and giving them through the auspices of the Guild an informative and thought-provoking day. ✈️

Delegates attending the Senior Flying Instructors Forum in front of College Hall, RAF Cranwell.




# EDUCATION AND TRAINING COMMITTEE REPORT APRIL 2010

## WARDEN DOROTHY POOLEY

The Committee met on 13th April, two days prior to the Forum for Senior Flying Instructors at Cranwell. Issues that continue to concern the Committee include the ongoing consultation by EASA on its proposed implementing rules for Pilot Licensing. We are ably represented by Peter Moxham who continues his sterling work to bring the most pressing matters to our attention. There is concern that there is no mention of the future of the IMC rating in the latest Comment Response Document and members are generally opposed to the widely advertised potential En route Instrument rating. The closing date for submission of final comments to the CRD is the end of June and this will be the last opportunity to comment on this subject.

The newly constituted working group on Training Standards is making slow progress but expresses a desire to achieve a correct rather than speedy conclusion. Many of the other topics currently under discussion within the Committee have a direct impact on the subject of training standards and thus we are anxious to produce an authoritative and comprehensive position paper. The most important event to report is that of the Forum at RAF Cranwell, which was held on Thursday 15th April. More than 100 attendees were enthusiastic in their response to the erudite and impressive papers on subjects as diverse as Aircrew Human Performance Training, Practical CRM for Instructors, Effective Lookout and Learning styles for adults in flight training. A lively

discussion followed the formal proceedings and a number of delegates showed considerable interest in the Guild. Thanks are due to the Chairman of the Instructor sub-committee for his enormous energy in stage managing the Forum and to the support of his team both on the sub-committee and at RAF Cranwell. The benefits of the biennial link between the Guild and Cranwell are manifest. As an aside, delegates who had taken advantage of the possibility of flying in to RAF Cranwell were then direct victims of the volcanic ash saga as the MOD closed its airfields during Thursday morning giving a number of delegates and the Cranwell team with unwanted logistical challenges in reaching their homes and then recovering their aircraft some days later! 

## THE GUILD OF AIR PILOTS AND AIR NAVIGATORS FLYING CLUB Programme for 2010

### JUNE

Wednesday 2nd	Keyston	Lunch (Courtesy of Cliff Spink)
Saturday 12th	RAF Brize Norton	Guild Garden Party
Thursday 17th	Oaksey Park	Lunch (Arranged by Dacre Watson & David Mathers)
Sunday 20th	Gilbournes Farm, Drayton	Picnic & Hurricane Arrival (Courtesy of Peter & Polly Vacher)
Friday 25th	Le Touquet	Lunch
Friday 25th		
- Monday 28th	Jersey	(Arranged by John Davy)
Sunday 27th	Wycombe Air Park	Lunch at Aero Expo

### JULY

Saturday 3rd	London City Airport	Airshow & Lunch with the Aero Section of the City Livery Club
Tuesday 6th	Halfpenny Green	Lunch (Arranged by Diana Green)
Thursday 22nd	Compton Abbas	Lunch (Arranged by Gerry Gerrard)
Friday 30th	Le Touquet	Lunch

### AUGUST

Sunday 1st	Goodwood	Breakfast Club
Sunday 15th	WLAC, White Waltham	Summer Lunch
Friday 27th	Le Touquet	Lunch

### SEPTEMBER

Tuesday 7th	Shobdon	Lunch (Courtesy David Corbett)
Sun 19th - Wed 2nd		"French Leave"
Friday 24th	Le Touquet	Lunch

### OCTOBER

### NOVEMBER

Sunday 21st	WLAC, White Waltham	"End of the Season" Lunch
Sunday 28th	WLAC, White Waltham	"End of the Season" Lunch