



THE HAWKER ASSOCIATION

NEWSLETTER NUMBER 14 - AUTUMN 2006

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EDITORIAL

Firstly an apology. The AGM Report that I trumpeted in the last Editorial somehow slipped off my computer and never appeared. However, I guarantee that you will find it this time!

A large number of **membership subscriptions are still overdue**. It's easy to overlook this formality, but it does give our secretary a lot of extra work. To remind you, your names are in **bold** on the Membership list on page 8. Please send your £5 cheques, payable to the Hawker Association, to Barry Pegram at 12 Becket Wood, Newdigate, Surrey, RH5 5AQ. Thank you.

Sadly the coach for the September visit to the Fleet Air Arm Museum at Yeovilton had to be cancelled due to lack of support as otherwise the Association would have had to subsidise the trip by an excessive amount. After the success of last year's fully subscribed trip to Duxford the Committee were confident about Yeovilton. To help future planning please let me know why they were wrong; why didn't you want to go by coach?

Sir Sydney Camm has been in the news with a 40th anniversary Memorial Service in Windsor and the restoration of his grave in Long Ditton Cemetery. The Association was involved in both events as reported below.

The Kingston Aviation Heritage Project is now up and running. Planning permission for the monument has been granted and the fund raising appeal has been launched. The appeal leaflet is enclosed.

And don't forget the ties and the 'RAF Harrier Story'.

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PROGRAMME FOR 2006

Wednesday 11th October

Wednesday 8th November

Peter Masson.

Wednesday 13th December

PROGRAMME FOR 2007

Wednesday 10th January

Wednesday 14th February

Wednesday 14th March

Wednesday 11th April

Wednesday 9th May

Wednesday 13th June

* = to be confirmed

*"The Future of RN Aviation" - An RN Officer.

"Racing Gliders and Optimising Performance" - **Afandi Darlington &**

Christmas Lunch for Members and partners - 12.30 pm.

Social with Quiz by **Les Palmer**.

"The easyJet story; why pay more?" - **Sir Colin Chandler**

"The Tripartite Evaluation Squadron" - **Air Cdre David Scrimgeour**.

AGM with video.

"Anything but Aircraft" - **Revd Vernon Lidstone**

Summer Barbecue

Unless stated otherwise, meetings are at the Hawker Centre, Kingston - the old Sports & Social Club - and start at 2.00 pm. Lunch and drinks are available beforehand, tea afterwards, and there is a large, free car park.

Afandi Darlington is an experienced aerodynamicist and expert competition glider pilot who has worked for BAe and Richard Noble. **Sir Colin Chandler** was, among other things, our General Manager when we were the K-B Division of BAe, and is now Chairman of easyJet. **David Scrimgeour** was the CO of the Kestrel Evaluation Squadron so will talk to us from first hand experience. **Vernon Lidstone** was Kingston's Commercial Director, retiring from business to become ordained and has worked for 15 years in the Prison Service.

This year the **Christmas Lunch** is open to partners. Tickets at £15, including a drink, available from Jan White and Ken Batstone at meetings or from Jan on 020 88760210. Cheques payable to the Hawker Association, please.

KINGSTON AVIATION PROJECT

Planning permission has been agreed for the centrepiece of the project, the 35 foot, curved, stainless steel column, pointing skywards with a climbing silver Hunter at its tip. Fundraiser Les Palmer has launched the appeal and he hopes that everyone that worked for 'Hawkers' will donate generously. A leaflet is enclosed with this Newsletter. Please read it and support the project by writing your cheques, filling in the donation form and sending them to Les. Please sign the Gift Aid declaration. The Government will then, at no cost to the donor (in fact with a benefit to higher rate tax payers), contribute an extra 28%. Let's get our great company, its aircraft and the people who made it all possible, the public awareness they deserve.

Consequent on the imminent retirement of long serving committee members, new ones are needed to help steer the project through the exciting second phase from planning permission to manufacture and erection. The committee has decision-making and control functions, the actual project management being in the hands of professionals. Please contact the Secretary, Trevor Jordan, on 020 89942018 for further details.

THE RAF HARRIER STORY

This excellent account (see Newsletter No.12, Spring 2006) has been reprinted and 30 copies have been bought by the Association. If you would like one, at the original price of £10 plus £1 post and packing, please call Barry Pegram on 01306 631125.

ASSOCIATION TIES

There are only 30 of these handsome ties left in stock. They are in red or blue with the Association logo diagonally across the blade and cost £7.50. You can buy them from **Harry Fraser-Mitchell** at meetings or by post (50p) from him at 16 Guernsey Drive, Fleet, Hampshire, GU51 2TG; cheques payable to The Hawker Association, please. Telephone him first on 01252 626996 to check availability.

THE ASSOCIATION THIRD ANNUAL GENERAL MEETING

The 2006 AGM, held on 12th April was attended by our President, John Glasscock, and some fifty Members, a big improvement on last year.

In his report Chairman Ambrose Barber reviewed the Association's progress against the main aims set out in the Constitution...

"To provide a means of communication between Members"; this seemed to be working very well but there may be former friends out there who have lost contact. Members were urged to locate such "old mates". Richard Cannon's web site continues to grow and provides a great deal of attractively presented information and includes 'hot' news.

"To organise social and other meetings and events for Members"; the various activities had attracted good support over the year as detailed below by the Secretary.

"To publish, from time to time, a Newsletter..."; the Newsletter continued to be popular thanks to Editor Chris Farara (modest blushes) and contributions from Members who were urged to keep writing. The Newsletter has two important roles: firstly it is the only way that some members are able to enjoy the Association, and secondly its contents are building up an archive record of Hawker history.

"To keep alive the spirit and memories of the Hawker Companies", "To publicise the achievements of the Hawker Companies, their people and their products" and "To encourage and facilitate the preservation and conservation of artefacts, papers, photographs, information and data relevant the Hawker Companies, their products, achievements and people..." Last year we funded the restoration of a Neville Duke cartoon owned by the Royal Aeronautical Society; it is now on display again. Recently the Association has agreed with the RAF Club that a bust of Sir Sydney Camm should be on permanent display in their fine Piccadilly building, and that we will contribute financially. We have also agreed to fund the refurbishment of Sir Sydney's headstone, 40 years after his death. In addition, Members of the Association are working on the Kingston Aviation Heritage Project and its memorial in Kingston. A recent appeal for help in fund-raising has resulted in several volunteers. The Association is also supporting a second impression of 'The RAF Harrier Story' published by the RAF Historical Society so that more Members may purchase copies.

Finally the Chairman thanked his enthusiastic Committee for their active support. Members concurred with a round of applause.

Secretary Barry Pegram reported that Membership was still growing, albeit at an expected lower rate, and now totals 355. 'Local' Members constitute 65.6%, 'Distant' 29.3%, and 'Overseas' 5.1%. 12.4% are ladies and 15% are still working. Meetings with talks attracted 40 - 60 attendees, social meetings 20 - 30 but amongst the most popular of all were Percy Collino's Summer Barbecue and Christmas lunch, at which 54 and 68 Members enjoyed themselves.

In the unavoidable absence of Treasurer Mike Hoskins, his report was read by Chris Farara. The surplus for the accounting period was £3689 but the true figure deducting uncashed cheque payments was a still very healthy £2774, up by £347 on last year. The raffle takings for the year were nearly £1000, testimony to the hard work of Percy Collino assisted by Jan White, to the generosity of those donating prizes and to all those who forked out at the door. Ken Alexander was thanked for examining and approving the accounts.

There being no new nominations the existing Chairman and Committee were re-elected and an amendment to the Constitution, introducing an Associate grade of membership for colleagues not employed by 'Hawkers' but working closely with them, was agreed.

After the meeting was closed the raffle was drawn and a video was shown while Members happily socialised.

CAMM HEADSTONE RESTORED

Thanks to the persistence of Mrs Brenda Bainbridge, secretary to Eric Rubython (Director & General Manager HAL and later HSAL, and retiring as Deputy Chief Executive BAe Aircraft Group) Sir Sydney's headstone, in St Mary's Church cemetery in Long Ditton, is once more in pristine condition. After discovering the grave to be in a neglected state, Brenda tracked down Sir Sydney's granddaughter, Elizabeth Dickson, to seek her permission to have restoration work done, it being necessary for surviving relatives to give such permission. Brenda also contacted a stonemason and the Hawker Association who were glad to fund the work. A full illustrated report appeared in the Surrey Comet.

CAMM MEMORIAL SERVICE

On Friday 21st July, a Memorial Service for Sir Sydney Camm CBE Hon FRAeS was held at The Parish Church of St John the Baptist, Windsor High Street, marking the 40th anniversary of his death. The event, which included the unveiling of a commemorative tablet and a reception at The Guildhall afterwards, was the brainchild of Flight Lieutenant Stuart Leigh-Davies FIS RAFVR T, Officer Commanding 459 (Windsor) Squadron ATC.

Notable attendees who addressed the congregation were Air Chief Marshal Sir Joe French, C-in-C Strike Command, RAF; Ambrose Barber, Chairman of the Hawker Association; and Elizabeth Dickson, granddaughter of Sir Sydney. The tablet was unveiled by Elizabeth's daughter and Sir Sydney's great granddaughter, Chloe Barrett-Dickson.

The Service was conducted by the Revd Mary Barnes and was attended by a large congregation with many colleagues of Sir Sydney from the Hawker Association, including Ralph Hooper, successor to Sir Sydney as the long term leader of the Kingston design team. BAE Systems was represented by the Engineering Director at Farnborough, Simon Howison. Local dignitaries included the Deputy Lord Lieutenant of Berkshire, John E Handcock, and the Mayor and Mayoress of Windsor. The RAF was represented by members of 459 Squadron ATC and RAF officers with fond memories of Sir Sydney's fighters, including Air Chief Marshal Sir Dick Johns, recently retired Chief of the Air Staff.

At the reception Flt Lt Stuart Leigh-Davies gave the background to the event and noted that it was the start of a longer term project to set up a larger, permanent memorial to Sir Sydney in the town.

TRIBUTE TO SIR SYDNEY CAMM - AERONAUTICAL ENGINEER

At the Memorial Service Ambrose Barber gave the following address. "To pay tribute to Sir Sydney Camm like this is a rare privilege. To do him justice would take hours so instead I invite you to join me in just four glimpses of his remarkable life.

Sydney Camm was borne here in Windsor in 1893, the eldest son of a skilled artisan woodworker, and was brought up in Alma Road in the social straightjacket of Edwardian England. While the Camms were nowhere near the bottom of the social pile he would have felt far removed from those who sent their sons to Eton. Instead Sydney went to the Royal Free School and was able to stay there until he was nearly 15 by dint of a scholarship.

An earnest lad by all accounts, there was of course no Air Training Corps for him to join but he flew models and was enthralled by the pioneer flying going on at Brooklands. He might start out as a woodworker like his father, but he would want that work to be on flying machines! One of those early pioneers at Brooklands is a young man named Tommy Sopwith. The enthusiasm each shares for manned flight would eventually bring Sydney Camm and Sopwith together; with momentous consequences for both men and, thankfully, for our free world also.

For our second glimpse I would ask you to 'fast forward' 30 years. It is now 1936 and the scene is the Boardroom of Hawker Aircraft, presided over by Tommy Sopwith. Camm himself has come a long way. He had been taken on by Sopwith as a draughtsman and his latest series of biplane designs, starting with the Hart, are so advanced that they now equip over 80% of the Royal Air Force. He is justly Hawkers' Chief Designer and has been rewarded by a seat on the Board. In the Boardroom they consider Camm's latest leap into the future. A fast, manoeuvrable and robust monoplane, it is the RAF's first eight-gun interceptor, designed for our defence as war clouds gather - but no Government order the production of this, the Hurricane, has been forthcoming.

At that momentous meeting the Hawker Board decide to back Camm's masterpiece at their own risk and go ahead without the financial cover for which they would have to wait another three months. War did follow and by the fateful summer of 1940 Hawker Hurricanes were being turned out at about 130 a month; so those crucial three months gained the RAF some 400 Hurricanes. Historically there was no other fighter available in sufficient numbers to bear the brunt of this Battle of Britain. Fighter Command's pilots flying Camm's Hurricanes shot down more of the enemy than all other RAF aircraft and ground defences put together. The Battle of Britain was a long time ago and if Camm had stopped designing after the Hawker Hart and Hurricane his reputation would already have been secure, with that of Mitchell and his Spitfire alongside - but Camm was only half done!

For our third glimpse let us move on to 1953. Camm's output has been prolific - the Brunel of 20th century aero-engineers - and his designs have repeatedly come to our defence. By the end of World War 2 his Hawker Tempest was the only piston engined fighter fast enough to intercept the incoming V1 flying bombs. When in 1950 South Korea was invaded, the Royal Navy, equipped with Camm's Sea Furies, held out against the early Communist jets. Now, in 1953, when our threat is from totalitarian communism, it is Camm's favourite and most beautiful design, the Hawker Hunter, which is being made ready through NATO to protect Britain and half Europe.

But the cheerful scene I choose in 1953 is that of Buckingham Palace where the Nation's debt to Camm and his patron Sopwith is now recognised by the honour of knighthoods for both men. 27,000 examples of their high performance military aircraft were built altogether which seems likely to remain an all-time British record. The nation, and in particular the Royal Borough of Windsor, can take just pride in Camm's memory - but what sort of man was he? To us who remember working for him as young men he was a revered and rigorous autocrat - and yet even now we still relish the exchange of smiling anecdotes which recall his own dry wit and instinctive judgements. Dedicated and quite unpretentious, I suspect that part of Sir Sydney remained the earnest soul from Alma Road.

For our last glimpse let us go to St Clement Dane's church in the Strand. It is 1966 and the scene is Sir Sydney's Memorial Service. Sir Thomas Sopwith is concluding his tribute in fulsome manner; I quote: "Undoubtedly he was the greatest designer of fighter aircraft the world has ever known. He had a wonderful character - forceful to a degree when he believed he was right but always ready to listen to another point of view on the rare occasions he was wrong. Outside his profession he was modest and self effacing, enjoying the simplest of pleasures and never asking more of life than the warmth of his family, his friends and an occasional round of golf."

We are not assembled here to glorify war but rather to celebrate our freedom. Freedom to worship here, freedom from domination whether Fascist, Communist or in the South Atlantic. As his legacy Camm's team at Kingston delivered the Hawker Harrier 'jump-jet'. When the time came no other aircraft was capable of providing the crucial air cover that made the Falklands expedition possible. Cometh our hour of need and in answer came the vision of this man, again and again.

In his tribute Sopwith ended by recalling Churchill's wartime slogan "Give us the tools and we'll finish the job", and affirmed that Camm's genius had brought such tools into existence, finishing with "On behalf of us all I say 'Thank-you, Sydney.'" I think that today, 40 years on, we all can and should still echo that recognition and that gratitude."

TRIBUTE TO SIR SYDNEY CAMM - THE PRIVATE MAN

Elizabeth Dickson, Sir Sydney's granddaughter, gave the following address at the Memorial Service, which shows a more intimate picture of the great man.

"I was 12 when he died very suddenly on the golf course. He loved playing golf, and a quick death doing what one loves is perhaps the best way to go, but for my mother, my grandmother and I it was such a shock. We were so stunned that, looking back, it

seems as though we didn't speak about it. There were obituaries, articles, a memorial service, but the family man whom we had lost, where was he?

There are others much better able than I to discuss his achievements in the public domain, so today perhaps I could share a few memories of Sydney Camm, the private man.

My early years were spent at Carradale, my grandparents' house in Thames Ditton. My parents were divorced so Grandpa was like a second father to me. When I was two and a half my mother and I moved to our new house and he often drove over after work to read my bedtime story. Every weekend we would go out together to choose a new book, which I read in the orchard at Carradale, looking out from my perch in the apple tree to see Grandpa mowing the lawn or trying to catch me unawares with his camera.

He took lots of photos of me, my mother, the cats, grandma, my school sports day, wild flowers, the coast at Seaford and Tintagel, the test pilots at Dunsfold, his new E Type Jag. When particularly exasperated by the men at the Ministry he would drive down to Dunsfold to let off steam. He was always very concerned for his pilots' safety and they had faith in the planes they flew.

But like many photographers he was happier behind the lens than in front of it. When I passed my 11+ he took us to Paris to celebrate. We travelled on the Golden Arrow and stayed in huge rooms in a glittering hotel near the Opera; so glittering that he had to wire home for more money half way through. There is my mother by the Eiffel Tower, Grandma in the Champs Elysee, me in my bobble hat in Montmartre; but where is Grandpa?

I do have one rare photo of him; young, slim, serious in a flat cap, holding a model biplane beside my young grandmother. He had founded the Windsor Model Aero Club and a great aunt has told me how the elegant Eton mothers used to come to their house in Alma Road to ask Sydney to build gliders for their sons' birthday presents.

From selling gliders to Eton schoolboys to designing fighters that have been sold Air Forces the world over, Grandpa grew up alongside the air industry. He left school at 12 and progressed through apprenticeships and night school to become Hawkers' Chief Designer. But his public milestones were accompanied, for us, by private moments.

After the success of the Hurricane Grandma was nearly machine gunned by a German fighter swooping low over the lawn at Carradale. The bullets splintered the dining room door. Grandma dropped the tray she was carrying and said "Syd! I'm not spending another night in this house!" They moved to Claremont, where Hawkers had their drawing office, and slept on camp beds in the basement.

The Hunter's record breaking flight to Paris was marked for us by a pair of blue-bird earrings that the pilot brought back for my mother, a gift from Grandpa.

And one of my most treasured memories is the day when I approached my normally taciturn grandfather in his study and asked what he was doing. "I'm trying to design a plane that doesn't need a runway" he said, and proceeded to explain the principles of vertical take-off.

A few months, perhaps a year, later he was dead. But when I was 15 I bunked off school one day and caught the train to London. At St Pancras station I asked around till I found the goods yard where the Harrier stood like a strange bird above the London streets. In a cloud of coal dust, with a bunch of reporters, I watched as she took off on her record breaking flight to New York. I wished that Grandpa could have seen her too.

HAWK NEWS

Thanks to BAE Systems' "Hawk News" for the following items.

On 21 August 1974 Duncan Simpson, Chief Test Pilot HSA Dunsfold, performed the maiden flight of the first Hawk, XX154. On 5 July 2006 Duncan Simpson, long since retired from test flying, flew with Sq Ldr Tony Clements from RAF Valley in a Hawk TMk1 to mark the millionth RAF Hawk flying hour.

The Hawk development aircraft, ZJ951, was on static display throughout Farnborough 2006 where it demonstrated to potential operators the functioning of the Mk 128 AJT's (Advanced Jet Trainer) three multi-function displays (MFDs), the head-up display (HUD) and the hands-on-throttle-and-stick (HOTAS) controls with an operational flight programme (OFP) designed to show the capabilities of the simulated air-to-air radar and electro-optical sensors as well as moving map coverage.

The Bahrain Defence Force has formally accepted the first of its six Mk129 aircraft, BT003. BT001 and 002 are being used at BAE Systems' Technical Training Academy to train Royal Bahraini Air Force (RBAF) maintenance technicians. The Mk129 is powered by the Adour Mk951 with full authority digital engine control (FADEC) and, with its MFDs, HUDs and HOTAS will prepare RBAF pilots into their F-16.

The South African Department of Defence has taken delivery of its first of 24 Hawk Mk 120 Lead-in-Fighter (LIF) trainers. Except for the first aircraft (SA001), used for development flying, all Mk120s are being assembled by Denel at Kempton Park near Johannesburg. Denel is also the exclusive manufacturer of tailplanes, airbrakes and flaps for all new Hawks. The Mk 120 will lead SAAF pilots into their Gripen fighters.

The Hawk Mk128 AJT (RT001) has completed a very successful tour of India and, with the Red Arrows, the Middle East and Greece. Starting in Goa the AJT moved on to Muscat in Oman, Abu Dhabi, Bahrain, Dharam in Saudi Arabia and Elefsis near Athens.

The NATO Flying Training in Canada (NFTC) programme with 21 Hawk Mk 115 advanced jet trainers has been operational since 2000 at bases in Saskatchewan and Alberta. The training programme is currently used by the UK, Canada, Denmark, Singapore, Italy, Hungary and the United Arab Emirates.

Australia's Hawk Mk 127 LIFs now have two new 'radar' systems: radar simulation and radar emulation. Radar simulation, housed in the nose, gives the operator a system that looks and feels like airborne radar without the cost, maintenance and weight penalties. The software mimics to the pilot that he has a radar and exhibits all the characteristics of such a system, sharing the aircraft's positional data with other 'players'. Each 'player' knows where the other aircraft are and targets are displayed as a return on the MFD in the Hawk's front cockpit. Radar emulation, in a centreline pod, allows the Hawk to emit a radar frequency signature that is different from its own, fooling detection systems into believing that it represents a particular threat, providing the Royal Australian Navy with training against various threats.

PRIVATE SEA HARRIER

Thanks to Mark Gerrard for the following, dated 22 May 2006...

XZ439 has been purchased by Art Nalls, a former USMC Harrier pilot, reportedly through a deal negotiated by Richard Goode. Initial information was that the aircraft was to be based at Cherry Point but it has shown up at St Mary's County Airport in Maryland, close to Patuxent River NAS, as advised to me by Matt Trenholme. Matt works for QinetiQ and is on the JSF programme at Pax. Matt went to see the aircraft and met Mr Nalls who is, as you might expect, very enthusiastic about getting her in the air again. XZ439 will fly at reduced weight with no radar, weapons system or wing pylons and Art plans to replace the military standard comms stuff with civilian equipment. He reckons to reduce the weight by about 1500 lbs and wants to have a crack at the time-to-height record. Matt has recommended a careful working out of the weight and cg!

Thanks also to John Farley and Mike Laker who provided information for the following...

Sea Harrier FA2, XZ439 was purchased from the Defence Sales Agency in October 2005 and was then shipped to the USA. Art Nalls is a very experienced former USMC operational and test pilot on AV-8As and Bs. He is well known on the US air show circuit with his L-39 Albatross and Yak-3. After US FAA Certification in the Experimental category Art hopes to be able to operate his FA2 from MCAS Cherry Point, North Carolina, home for USMC Harriers from the start of the AV-8A programme. He has already recruited experienced Harrier ground crew.

ONCE MORE INTO THE BREACH...

Unfortunately Dave Scrimgeour's 10th May talk on the Tripartite Evaluation Squadron had to be postponed due to his short-term illness. However, Members were treated to a fascinating 'last minute' substitute presentation by the ever willing John Farley. It was a kind of aeronautical scrap-book of items collected by John and saved on Powerpoint.

There were 10 items starting with some RAE WW2 film of ditching trials of a Mustang model to determine the best technique. The models, launched by a falling-weight powered catapult, covering a range of speeds, flight path angles and angles of incidence, showed that the aircraft invariably dived under the water so bailing out was the best bet.

Next came film of the Sukhoi Su 27 with foreplanes performing at the 1989 Paris Air Show. There were 360 degree turns in 10 seconds, pulls to 90-110 deg alpha on the approach, a full 360 degree pitch manoeuvre at constant height, 90 degree alpha descents and full tail slides, all without the engine missing a beat! Apparently, an F-16 pilot watching was moved to shout "eject!" during the display.

An aeromodelling interlude featured John's own electrically powered 5 ft span Zephyr, which flew beautifully, and a B-52, powered by 8 miniature gas turbines each costing £2000, which crashed spectacularly with great realism, including the pall of dense black smoke which so often accompanies full scale disasters. Fortunately the impact was inside the airfield boundary and no one was hurt.

John then explained his philosophy of safety and accidents. There are, said John, no 'acts of God' because God does not design, build, maintain and operate aircraft. Only people cause accidents; through pilot error, technical error (maintenance, design, manufacture) and operational error. Pilot error, the largest proportion of accidents, can be minimised by selection, training and good design. Ultimately by increasing automation the pilot can be eliminated!

A film of a helicopter trying to rescue a boat in trouble by towing showed it rotating on the towline straight into the sea, because the boat was waterlogged.

Film of smart weapons and the AV-8B+ in the Gulf War was followed by film of extreme engine testing. We saw fan blades being deliberately blown off to demonstrate blade containment, bird ingestion tests using 3 two-and-half pound birds at 160 kn for only a 3% loss of thrust, and rain ingestion testing with the engine swallowing 15,000 gallons of water per hour! Airline passengers in the audience felt much relieved.

VTOL history was represented by film of the Hightower RAE control rig (see Newsletter No.11) which led to the specification for the Rolls-Royce TMR (Thrust Measuring Rig/Flying Bedstead) really designed for control system research. Initially flown by RR test pilot Capt. RT Shepherd, the bulk of the taxing and dangerous RAE flying was by Sq Ldr RA Harvey.

John's final selection covered the UK National Air Traffic Service (NATS) which copes with 26,000 aircraft per week, one flight every 16 seconds or 1.2 million flights per year. It's good to know that we are in safe hands when flying the airways.

During question time, when asked about the Su 27's remarkable engine handling, John noted that the aircraft had vortex generators on the nose pitot to nail the vortices so they don't alternate from side to side, and a the long, carefully shaped intake duct feeding a tolerant engine.

It would be an understatement to say that the audience was delighted with the substitute talk which had entertained, informed and given plenty of food for thought.

BOEING TRAINING SYSTEMS AND SERVICES

On 12 July, Keith Hertenberg, a colleague and friend from the distant HSA and McAir days, came back to Kingston 35 years after his first visit. Then he was a solo liaison engineer from St Louis, but now is Boeing's Vice President Training Systems and Services with 2500 people working for him at 28 locations in 7 countries. Keith took his audience, many of whom had known him in the old days, on a tour of his domain, concentrating on the UK activities. The three main activities are: Aviation Training International (ATI) teamed with Westlands, Military Flying Training Systems (MFTS), and Military Training through Distributed Simulators (MTDS) with QinetiQ, the current manifestation of the RAE.

ATI provides training for all UK Army Apache helicopter air crew, ground crew and maintenance personnel on a 30 year contract with the MoD, and is headquartered at Sherborne in Dorset with the pilots' school at Middle Wallop. There are 125 ex-army instructors and equipment includes a Full Mission Simulator (FMS) and 3 Field Deployable Simulators (FDS). The FMS has twin 17 ft domes with full motion, high fidelity outside world display and cockpits housing the pilot, co-pilot and gunner. The FDS has the same cockpit but in 8 ft domes without motion. The FMS and FDSs can be remotely linked so they can be 'flown' together. Also available are Multi Purpose Display (MPD) trainers with operational menus, and part task and multi-purpose maintenance trainers.

Boeing are currently in competition to be the Training System Partner for the UK MFTS. This would be a 25 year contract for industry to provide all ab-initio flying training for the RAF, the RN and the Army. The Hawk 128 will be the fast jet trainer. The competitors are Ascent (Lockheed-Martin with Vosper-Thornycroft), Sterling (Thales with Boeing) and Vector (Bombardier with Lear Siegler).

The UK MTDS mission training programme capability concept demonstration phase has been won by Boeing with QuinetiQ and is running at RAF Waddington. The full programme phase will also go out to competition. Keith also described the USAF system which is operational world-wide with simulators at various locations in the USA and at overseas bases. However, all can be linked via satellite so that 'pilots' in, say, F-18s in the USA can fly combat with F-15s in Germany and AV-8Bs in Japan thus leading to great operating economies.

Keith's lecture was very detailed and it has been possible only to give a flavour of the fascinating systems he described. Clearly, with fewer and fewer military aircraft lasting longer and longer it makes very good business sense for aerospace companies to compete in this training arena.

HAYWARD IN SWITZERLAND

Eric Hayward recalls a personally significant day in Switzerland...From 1971 until 1977 I was seconded to act as liaison engineer between the Swiss Federal Aircraft Factory at Emmen and Hawker Siddeley/British Aerospace, Kingston. I had to travel frequently between Switzerland and the UK in that period when Hunters were being refurbished at Kingston and Dunsfold, transported by road to Emmen and reassembled there by the Factory's employees.

Initially I had no knowledge of the Swiss, or Swiss-German, language and so the day of my transfer to the new job was approached with some trepidation. Having been established in my own office at Emmen various people came in and tried on me what little English they knew (and it was not much) while I tried to understand them. The problem was that I did not know at that time whether the person who was trying so hard to converse with me was the Works Manager or a cleaner. However, as time went by the borders were slowly crossed and problems were discussed and solved in a strange English/Swiss/German hybrid language, with a lot of arm waving and pointing.

What was really my finest hour occurred when my phone rang one day about a year after I had first arrived at Emmen. I picked it up and the caller asked whether Mr Inecan was there. I replied "Sorry, but this is not now his office; if you would care to wait a moment I will give you his new telephone number," which I duly did. We said our good-byes and I put the phone down.

On reflection I stopped still when I realised that the whole conversation had been conducted in very correct Swiss-German and we had both understood each other perfectly. That was the point when I had crossed the hidden barrier. To me it was a very satisfying day. Of course there was an incredible amount more to learn to become totally fluent but I could now converse and understand; and more importantly, be understood - an achievement I will always remember.

BEATING THE SYSTEM

John Farley recalls his early days in the Royal Air Force...When Duncan Sandys announced that all manned fighters in the RAF were to be replaced by missiles in his Defence White Paper of 4 April 1957, I was a student on Vampires at 8 FTS Swinderby and working towards getting my wings three months later. The White Paper caused more concern among the instructors than the students because we had more pressing things to worry about, like passing the course. Naturally there would be manned fighters and we were determined to fly them. So we pressed on.

It was after our pass-out parade that we got our first clue that post-Sandys the RAF was not sure what to do with us. Although expecting to go to a fighter or bomber conversion we were actually sent home on extended leave. A month later we got posting notices to 7 FTS Valley which became a holding unit for new pilots. Like Swinderby, Valley had Vampire 5s, 9s and T11s, but with fewer students joining they had spare aircraft available to keep the newly winged wonders in practice.

Unlike Swinderby, none of us was killed at Valley although I don't know why. At this stage, with only about 100 hours solo to our names, flying together in two-seat Vampire T11s the temptations were countless. On one sortie I was accompanied by Barrie Tonkinson who later tested Harriers for HSA at Dunsfold. At 40,000 ft he spotted a Valley instructor leading a pair of students - not real pilots like us, you understand - as they popped up through the cloud tops at 15,000 ft. To a pair of fighter-pilots-in-waiting they were just asking to be bounced.

The dive plus the flash past underneath and pull up in front of them, doubtless achieved the aim of startling the formation, but it also overstressed our aircraft, broke an engine bearing and left the poor old DH Goblin with no alternative but to shake and quit. Being above total cloud cover, over the Welsh mountains, and with limited standby instruments and no means of navigation, in a gliding jet might have bothered an experienced crew. But we just got some steers towards base, established ourselves in the overhead, spiralled down, broke cloud on the downwind leg, kept our speed up on the runway, cleared neatly on to the taxiway and got out to await a lift. Clearly there was a Being of greater ability than Duncan Sandys looking after the future of RAF pilots. Not surprising when you think about it.

After a short while the Wing Commander Flying drove up in his Landrover. He asked what the trouble was and we replied "The engine, sir." He did not say a word, got a broom out of the back of the Landrover and pushed the handle into the air intake. When he found the engine would not turn he remarked "Well done chaps" and without further words gave us a lift back to the squadron offices. Later the "well done chaps" was retracted when the instructor we had bounced returned in quite an unpleasant frame of mind.

However, some of us did eventually make the Hunter conversion course at Chivenor. We went straight on to Mk4 Hunters as there were no two-seaters in those days. After the Vampire it seemed like a space ship to us. With hindsight it was akin to passing your driving test and then being given a Formula 1 racing car to drive. Three months later six of us were told we had passed the course. Then things really went wrong.

Nine months after the White Paper the RAF had decided that only permanent commission (PC) pilots would be posted to the 'dying' fighter squadrons. There were two PC chaps among our six so off they went to Hunters, while the remaining four of us were posted to ground jobs. I cannot begin to describe just what a blow that ground posting was to us. For two years we had struggled, against seemingly impossible odds, to satisfy our instructors only to be grounded by a politician. We had studied, we had marched, and we had

flown; we had done everything asked of us. That even included walking through a village knocking on doors and getting permission to enter people's gardens to pick up pieces of wrecked Vampire after one of us was killed on a solo sortie. We did not deserve this ground tour. We had been good enough and determined enough for anything the RAF had asked of us; we deserved to fly.

Our posting was to the Royal Radar Establishment (RRE) at Malvern. In those days Fighter Command, to whom we now belonged, was struggling with the problem of how to defend the UK from supersonic dash bombers using subsonic Hunters. One idea was to fly a Hunter towards an incoming bomber on a parallel track, offset to the side of the threat, then, when the bomber was still some miles away, turn the fighter in towards its track and hope to get a shot at it as it momentarily crossed in front. For such a manoeuvre to succeed the fighter had to be displaced to the side by just the right amount and turn in at just the right moment along a very precise curved path. Only then would the target pass across the fighter's nose within range of its guns; say between 100 and 500 yards. Furthermore, the interception pattern depended on the bomber's speed and altitude.

To see if this would work a trials unit was set up at Malvern using an experimental ground controlled interception station called Z Block. In one room was the fighter controller with his radar display and lots of transparent sheets (called overlays) on which were drawn various combinations of bomber and fighter tracks for different speed and height cases. In another room was a technician able to 'fly' a simulated bomber across the controller's screen.

When the controller saw an incoming 'raid' he had to select and alert a UK fighter base so that a fighter, 'flown' from that location by another technician in another room, could be scrambled. When the fighter blip appeared on his radar the controller had to choose the best overlay, slap it on his screen and talk the blip along the path given on the overlay.

When the interception was a success that was fine, but when it failed the RRE boffins needed to know why. Had the controller used the wrong overlay, scrambled the fighter too soon or too late, or issued the wrong instructions to the fighter? Perhaps the fighter pilot had not 'flown' accurately enough or the bomber pilot had not kept to his brief. These matters were left for an observer to judge. After watching a few interceptions it was easy to spot what had gone wrong and any junior NCO could have done the task. The trouble was Fighter Command had none of those to spare, but it did have plenty of new Pilot Officers without a job. Like Ken Cooper, Maurice Harvey, Mac McLaughlan and me.

We lived in a local hotel; the Hornyold Arms. Because the trial had a high priority we worked shifts involving weekends, evenings and nights, which meant we often had time off during the day and in the middle of the week. None of this luxury lifestyle was the slightest compensation for not flying; not the slightest.

One day Mac had to go to Barnstaple Magistrates Court to sort out a little matter involving his Austin Healey 2000 car when we were in Chivenor. After his court business was done he paid a visit to our old instructors and found the station had 84 Hunters and very few students, so clearly all the flying one could wish for awaited anybody posted to Chivenor. When Mac got back we talked long into the night about how such a posting might be arranged. I can't remember who first mooted the idea that our salvation lay in the offices of Fighter Command Headquarters at Bentley Priory, but the more we considered this the more certain we became. It was time to plan.

We needed to nose around Headquarters but having no invitation what would be the best time? On RAF stations Wednesday afternoons were traditionally taken up with sport - a perversion as far as real aviators were concerned - and so the number of people minding the shop was greatly reduced. Wednesday afternoon had to maximise our chances.

The next Wednesday Mac and I set off for Bentley Priory in his Austin Healey. As we drove I don't think either of us had a clear idea of what we were looking for, but what we found was an office that contained two Flight Lieutenants, one responsible for day-fighter postings, the other for night-fighters. From there on it was all down hill. While the day fighter guy was busy getting an early lunch before playing sport (ha!) we listened sympathetically to the night-fighter man explaining about his awful ground job and how he had to spend his hours filling in terrible posting forms - like these - when he really should have been flying. When he left for lunch we bade him farewell in the car park. As his car disappeared round the corner it took only a moment to pop back to the now empty office, put four names on the appropriate day-fighter paperwork, and leave a deserted building.

The following week our boss at Malvern came to see us. He was very cross. He would never understand the RAF; we had been posted. Just as he had got us trained and doing a useful job. Posted. It was ridiculous. We pulled long faces and muttered "Oh no, not really sir!" and added how much we loved working for him on such an important job, to say nothing of living in the Hornyold Arms. The 1957 batch of RADA students could have done no better. Ten days later we were airborne at Chivenor.

Three weeks after that the Wing Commander flying stood up at the end of Met Briefing, read out our four names and said "Together in the Station Commander's Office at nine o'clock, and don't take your caps off." What followed was just like a scene from a 'B' movie. We stood in line, at attention, while the Station Commander continued to work, head down, with papers on his desk. He gave no indication that he even knew we were in the room. Eventually, after what seemed an age, he looked us up and down and reading from a piece of paper slowly spoke our names.

We stood in silence - going sixpence, half a crown and dustbin lid - while he stared at us. "Well, is that YOU?" We each just managed a "Yes sir." He intoned that he had reason to believe that we had interfered with Her Majesty's posting process and finished by barking "Have you got anything to say for yourselves?!" "No sir" came out four times, followed by more silence and more staring. Finally he spoke again. "Well I have.....It's the best thing I've heard of since the war. Would you like to go to Hunter squadrons?"

We all owe that man. It happened for us because the Group Captain behind the desk was a WW II commander, a man who understood that what matters above all to a fighting service is the motivation of its troops; and we were motivated.

The rest, as they say, is history. Mac eventually finished up training British Airways 747 Captains; Maurice went on to become the one-star in charge of the whole RAF air traffic control system; Ken did his time on Hunters and was last seen in Hollyhead with a collection of old MGs and young Welsh dolly birds; while I got a day job testing for Hawkers.

HAWKER PEOPLE NEWS

Sadly, Gerry Howard tells us that his wife Mary, known to members of the Kingston Project Office in the early 1960s, recently died.

Our condolences to family and friends of Experimental Manager Bert Callan, who died in September.

We also have to report the sad news that Hugh Merewether also died in September.

NEW MEMBERS

We welcome the following new members:

Martin Alton, Richard Dobbs, Celia Evans, Graham Parker, Douglas Reallf, Maurice Shakespeare (Associate), Peter Whitney.

SUBSCRIPTIONS

Members with overdue subscriptions (at mid September) are in **bold** type below. It's only a fiver to renew! (See Editorial)

HAWKER ASSOCIATION MEMBERS - SEPTEMBER 2006

A: Mike Adams (a), Ken Alexander, Peter Alexander, John Allen, Martin Alton, Terry Ansty, Alma Apted, Steve Apted, John Arthur, Alan Auld, Bryan Austin. **B:** Brenda Bainbridge, Colin Balchin, Ambrose Barber, Ray Barber, Derek Barden, Peter Barker, Geoff Barratt, Graham Bass, Ken Batstone, Dennis Baxter, Colin Bedford, Anne Beer, Guy Black (A), Keith Bollands, Paul Boon, Cliff Bore, Steve Bott, Pat Bott, Bob Bounden, Alan Boyd, Pat Boyden, Phil Boyden, Roy Braybrook, Clive Brewer, Laurie Bridges, Ian Brine, Doug Britton, Peter Brown, Christopher Budgen, Roy Budgen, George Bunt, Reg Burrell, Robin Burton, Ron Bryan. **C:** Richard Cannon, Maurice Carlile, Chris Carter, Bob Catterson, Ken Causer, Jeremy Cawthorne, John Chacksfield, Colin Chandler, Keith Chapman, Gerry Clapp, JF Clarke, John Cockerill, Hank Cole (a), Bob Coles, Percy Collino, Brian Coombes, David Cooper, Paul Cope, Patricia Cosgrove, Ron Cosgrove, George Cotterell, Nick Cox, Eric Crabbe, Shirley Craig, John Crampton, Russ Culley, RG Curtis. **D:** Roger Dabbs, John Dale, Clive Dalley, Andy Dalton, John Danse, Afandi Darlington, Jo Davies, John Davie, Ken Davies, Trevor Davies, Diana Dean, Ralph Denning (A), Norman Devielli, Mike Diprose, Richard Dobbs, Mike Dodd, Lambert Dopping-Heppenstal, Jack Dowson, Brian Drew, Dick Duffell, Jean Duffell, Peter Drye, Neville Duke, Chris Dunhill, Mike Dyke. **E:** John Eacott, John Eckstein, Andy Edwards, Dave Edwards, Tony Elliott, Celia Evans, Norman Evans, Roy Evans. **F:** Russ Fairchild, Ian Falconer, Mike Fantham, Chris Farara, John Farley, John Farrow, Max Fendt, Stan Field (a), Geoff Fieldus, Mike Finlay, Wilf Firth, Ann Fletcher, Richard Fletcher, Colin Flint, Dave Fowler, Mike Frain, Harry Fraser-Mitchell, Geoff French, Mike French, Heinz Frick. **G:** Roy Gaff, Mike Gane, John Gardner, Patricia Gardonio, Peter Gates, Sandie Gear, Tim Gedge (A), Mark Gerrard, Alan Gettings, Tony Gibbs, John Gilbert, Maurice Gilson, John Glasscock, Pat Goodheart, Eric Goose, John Gough, Andy Green, James Griffin, Barry Grimsey. **H:** Douglas Halloway, Liz Hargreaves, Simon Hargreaves, Bryan Harman, Dawn Harris, Guy Harris, Thelma Harris, Brian Harvie, David Hastie, Eric Hayward, Bob Head, Sheila Hemsley, Ted Hemsley, Jock Heron (A), Tony Herring (a), Keith Hertzberg (a), Frederick Hewitt, Merlin Hibbs, Richard Hickey, Peter Hickman, Vince Higbee (a), Reg Hippolite, Keith Hobbs, Chris Hodson, Gordon Hodson, Derek Holden, Doc Holliday, Ralph Hooper, Linda Hopkins, Paul Hopkins, Mike Hoskins, Gerry Howard, Dawn Howes, Terry Howes, Simon Howison, Gordon Hudson, Gavin Hukin. **I:** Pete I'Anson, Len Illston, Maive Impey, David Ince (A), Brian Indge. **J:** Keith Jackman, John Janes, Gordon Jefferson, John Johnson, Brian Jones, Ian Jordan, Trevor Jordan, Robin Jowit, Alf Justin. **K:** Brian Kent, Dennis Ketcher, Bill King, Dave King, Martin King, Charles Kirk, Ralph Kuhn. **L:** Barry Laight, Mike Laker, Charles Lamb, Richard Lane, George Latham, Paul Latham, Pam Lawrence, Andrew Lawson, Ron Leader, Geoff Lee, Gordon Lewis (A), Mark Lewis, Vernon Lidstone, Gary Lillistone, Andrew Lloyd, Gary Lockley, David Lockspeiser, Norman Long, Gordon Lorrimer, David Lovell. **M:** Albert Magee, Al Mahoon, Mick Mansell, John Marsh, Bill Marshall, Bob Martin, Dennis Mason, Brian Maton, Don McGovern (a), June McKeon, Ronald Mears, Mike Mendoza, Jim Middleton, Kit Milford, Robert Millar, Jack Mills, Brian Monk, Pat Moon, Leslie Moore, Pauline Moore, Nicholas Morland, Pete Munday, Carole Murphy, Gloria Murphy. **N:** Jennifer Nicholas, Anthea Newman. **O:** Roger O'Brien-Hill, John O'Sullivan, Robin Owen. **P:** Les Palmer, Graham Parker, John I Parker, John L Parker, John Partridge, Bernard Patrick, John Pearce, Barry Pegram, Martin Pennell, Bill Phillips, Ted Pincombe, Dick Poole, Don Pratt, Dave Priddy, Mike Pryce (A). **Q:** John Quinn. **R:** Clive Radley, Raharto (a), Frank Rainsborough, Colin Raisey, Brian Ralton, Paul Rash, Diane Raymond, Vanessa Rayner, Douglas Reallf, David Rees, Peggy Remington, Francis Rhodes, Geoff Richards, Bill Richardson, Chris Roberts, John Rodd, Eric Rubython, Malcolm Ruscoe-Pond, Peter Ryans. **S:** Helen Sadler, Roger Samways, Bernie Scott, Alex Seaman, Ray Searle, Maurice Shakespeare (a), Arthur Sharpe, Peter Sibbald, Bill Sherwood, Jack Simmonds, Sadie Simmonds, Duncan Simpson, Derek Sims, Gerry Sims, Charles Smith, Don Smith, Harold Smith, John Smith, Karl Smith, Pete Smith, Selwyn Smith, Roy Sparrow, Peter Spragg, Cora Stanbury, Vivian Stanbury, June Stephens, John Strange, Carroll Stroud, Mike Stroud, Christine Strudwick, Tony Strudwick, Douglas Stubbs, Bill Swinchatt. **T:** David Taylor, Stuart Taylor, Brian Tei, Reginald Thompson, Geoff Tomlinson, Graham Tomlinson, Rod Tribick, Peter Trow, Ron Trowell, Frank Tuck, Bert Turner, Michael Turvey. **U:** John Underhill. **V:** Herbert Valk. **W:** Terry Walker, David Ward, Harry Webb, Patrick Webb, Graham Weller, Rob Welsh, AP West, Bryan West, Judith Westrop, Jenny Wheatley, Phil Wheatley, Jan White, Mick White, Roy Whitehead, Peter Whitney, Annette Williams, John S Williams, Don Williams, Ron Williams, Sally Williams, Colin Wilson, George Wilson, Paul Wilson, Dick Wise, Helen Woan, George Woods, Len Woodward, Alan Woolley.

COMMUNICATIONS

Recent experience has shown that our Website is not a good medium for passing urgent information to Members and the Committee considers that a direct e-mail message would be better for those Members with this facility. The 'blind copy' procedure would be followed so that Members' e-mail addresses would not be broadcast. If you wish your e-mail address to be put on this proposed urgent message distribution list please e-mail your request to Richard Cannon at <webmaster@hawkerassociation.org.uk>.