



THE HAWKER ASSOCIATION

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Website: www.hawkerassociation.org.uk

EDITORIAL

Those of you who read the headline may think that Spring has come a little early this year; but last year when I called the equivalent issue Winter 2008 some Members thought it didn't sound right, so Spring it is.

With this Newsletter you will find the AGM notice and the **membership renewal** form. Please fill it in and send your subscription straight away, as indicated, to our hard working Secretary, Barry Pegram. In spite of the recent reminder there are still a number of subs. outstanding for last year! Did you renew? Check the Membership List in the last Newsletter, No. 22, please.

The Association is privileged to have been invited to visit the Rolls-Royce Heritage Trust Museum at Filton on 17th September. Numbers are limited to about twenty so please let Barry (01306 631125) know if you want to go. Transport down the M4 is for Members to arrange between themselves.

The Association has made a donation to the appeal for the long overdue Bomber Command Memorial as publicised in the Daily Telegraph. Nearly 60,000 RAF Bomber Command aircrew were killed during the campaign. For too long this has gone without permanent recognition.

John Farley will be coming to the 13 May meeting to offer his excellent book, "A View from the Hover" (see reviews below) at a reduced price for Members which he will be pleased to sign.

Sadly, amongst the deaths recorded below is that of Trevor Jordan, Kingston's performance wizard who pioneered V/STOL performance analysis and played a major part in the Harrier shipboard flying and Ski Jump programmes, and Pegasus engineer Ian Milne.

My file of unpublished contributions is empty - please delve into your memories and tell what you did at 'Hawkers'.

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PROGRAMME FOR 2009

Wednesday 11th February	"Testing V/STOL Aircraft". Dr Michael Pryce.
Wednesday 11th March	"Folland and the Spirit of Hamble". Chris Hodson
Wednesday 8th April	Annual General Meeting, Harrier flying model demonstration by Jim Morely , and video.
Wednesday 13th May	"The Kestrel Evaluation Squadron - and More". Don Spiers. John Farley book signing.
Wednesday 10th June	Summer Barbecue - 12.30 for 1.00 pm
Wednesday 8th July	"America!". Dick Wise.
Wednesday 12th August	Social and video.
Wednesday 9th September	Social and video.
Thursday 17th September	Visit to Rolls-Royce Heritage Trust museum.
Wednesday 14th October	TBD
Wednesday 11th November	"The BAE Systems Heritage Programme". John L Parker.
Wednesday 9th December	Christmas Lunch

Historian **Michael Pryce** spoke to us about Kingston projects in November 2005 (see NL. 12), and **Chris Hodson**, son of Gordon, is Military Programme Manager, GE Aviation Hamble, and a Hamble enthusiast. **Don Spiers's** distinguished Ministry career included the positions of Controller Aircraft (CA) as well as Director General Aircraft (DGA), and **Dick Wise** will probably be best remembered as the Harrier Project Director before he was posted to the USA. Project Manager **John Parker** now has responsibility for BAES heritage activities, and at the AGM **Jim Morely** will demonstrate his remarkable indoor radio-controlled Harrier, based on the German Schnellflight helicopter model.

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.

MEMBERS' E-MAIL ADDRESSES

The Association's list of e-mail addresses is out of date. Often when we try to contact you this way we fail. Please take a minute to send the Editor (cjfarara@ntlworld.com) a short message, subject "HA E-mail", quoting your current e-mail address. Thanks.

CORRECTION

Don Williams writes to say that there is an error in the Surrey Comet article reproduced in the last Newsletter, NL 22. Leyland took over the Richmond Road factory in 1921, not 1928, and thereafter built Trojan cars there as well as reconditioning WWI lorries. Don also recommends the book "Can You Afford to Walk" (ISBN 1-870519-45-0) for anyone interested in the factory's non-Hawker years. It's out of print but is available on request from the Surrey Public Library system.

HURRICANE NEWS

Royal Canadian Air Force Hurricane IIB, G-HHII/5403, belonging to the Hangar 11 Collection was moved from Hawker Restorations at Milden, Suffolk, to North Weald after completion of systems testing. Painted as a 174 Squadron 'Hurribomber' the aircraft will carry a pair of fibreglass and steel dummy 250 lb bombs. It is planned that it will appear at airshows during 2009.

SEA FURY NEWS

Sea Fury TMk20 VX281/G-RNHF has arrived at RNAS Yeovilton by road from North Weald. It is being prepared for the 2009 season which celebrates the centenary of the founding of the Royal Naval Air Service and the placing by the Admiralty of the first order for its first aircraft, His Majesty's Airship One, the Mayfly, on 7 May 1909. Events include a fly past HMS Illustrious at Greenwich on 7 May, a fly past over Eastchurch, Isle of Sheppey, the home of the first Royal Naval Air Station, on 24 July, Culdrose Air Day on 29 July and another fly past HMS Illustrious, this time in Liverpool, on 17 October.

HUNTER NEWS

Belgium's last surviving Hunter FMk61 has been mounted on a column at a roundabout near Chievres Air Base where it served with No.7 Fighter Wing. The Belgian Hunters were retired in November 1973. Many were refurbished by HSA and sold.

HARRIER NEWS

Duncan Simpson sent in a cartoon by Peter Brookes from the Times of 27 November last. It shows a cross looking Gordon Brown standing in front of a Harrier surrounded by cases, labelled Iraq/Afghanistan, full of bundles of bank notes which he is throwing in large quantities down the intake of the GR9. They emerge as flaming debris. Our dear Prime Minister is saying "What recession?" As Duncan says, "It seems the Government of the day has found a new use for the Harrier."

SEA HARRIER NEWS

Art Nalls completed his first public display with XZ439 at the Culpepper Air Festival in Virginia on 11 October 2008. First flight after the Pax river accident when the nose leg collapsed was on September 14. Art intends to take XZ439 to several air shows this year.

WINDSOR CAMM MEMORIAL APPEAL LAUNCHED

The Royal Borough of Windsor and Eton has unanimously voted in favour of the project to mount a full scale model of a Hurricane Mk1 in Alexandra Gardens, Windsor. The manufacture of the model, from glass reinforced plastic over a galvanised steel frame, and its erection, including all engineering and road works, will cost £45,000 plus VAT. BAE Systems and Rolls-Royce have already given £10,000. The Windsor Observer, offering background information said, "Sir Sydney Camm, an aeronautical engineer who lived in Alma Road, designed the Hawker Hurricane fighter in 1934. The jet was used in the Battle of Britain..." (Has anyone got a GA? - Ed.)

To donate contact Stuart Leigh-Davies on 07760 315505 or by e-mail at stuart.ld@btinternet.com.

SIR KEITH PARK MEMORIAL CAMPAIGN

Under the Commander-in-Chief, Fighter Command, Air Marshal Hugh Dowding, Air Vice Marshal Keith Park, a New Zealander, commanded No.11 Group which was responsible for the defence of South East England during the Battle of Britain. After the war Marshal of the Royal Air Force Lord Tedder said of Park, "If ever any one man won the Battle of Britain, he did. I don't believe it is recognised how much this one man, with his leadership, his calm judgement and his skill, did to save not only this country but the world." He was an inspirational leader who used to visit his squadrons in his personal Hurricane, dressed in a white flying suit.

Peter Townsend in his masterly study of the Battle of Britain, 'Duel of Eagles' (Wiedenfield & Nicolson, 1970), said, "Dowding had all along been the architect of victory, labouring for over four years in the conviction that it could only be won 'by science thoughtfully applied to operational requirements'. His principal commander, Park, was the master tactician; with a greatly outnumbered fighting force he had outwitted and repulsed a courageous, determined enemy." After winning the Battle these two great men were not acclaimed; Dowding was replaced as Commander-in-Chief and Park was relegated to Training Command. Although he had defeated the Luftwaffe he was pilloried for not adopting the 'big wing' formation tactics promoted by Bader and Leigh-Mallory who had commanded No.12 Group to the north, preferring the greater flexibility afforded by smaller formations.

There is no memorial to Keith Park in London, the city he saved; his name can be found only on two roads (at Biggin Hill and Uxbridge) and by luck on a Battle of Britain class steam locomotive that is being restored. What is now proposed is a statue of Sir Keith standing for six months on the 'vacant' plinth in Trafalgar Square and a permanent memorial in Waterloo Place. This proposal is fully supported by the Mayor of London, Boris Johnson, the Park family and countless RAF officers, veterans, commentators, politicians and members of the public.

Please register your support for the planning application shortly to be made to the Westminster City Council by going to www.sirkeithpark.com where you will also find information about the campaign. When fund-raising starts, give generously.

A VIEW FROM THE HOVER

John Crampton talks about John Farley's new book...

This is a good book. No it isn't, it's a very good book - in fact a very, very good book. It gets Nine Plus out of Ten. Beautifully written and produced, and so well designed. The chapters outline his experiences and at the end of some is an annexe describing what common pilots like me call Chinese flute music - mysterious mathematical formulae to help clever Dicks appreciate his descriptions of flight and flying, all mostly well over my head. Warning, there's a strange paragraph at the top of page 227 in which he gives his opinion of me: "Well suited for playing the lead in a social farce in a West End theatre." And "the sort of bloke who makes Hugh Grant seem like a builder's labourer." I'll give you my opinion of Farley a little later.

The book is so immensely helpful. For instance, under Chapter 1 on page 3 is written "Start Here". Clearly he thinks we are all a bunch of idiots who, having bought the book, will look at it and wonder where to start. Has there ever been another book telling the reader where to start? Anyway, if it is the good book I have said it is in my first paragraph why does it not get Ten out of Ten? Here I have to be very careful; it's as if I'm about to start walking on very thin ice indeed. Here goes. In Chapter 15 (after Chapter 14 and before Chapter 16 as Farley would no doubt explain) there is a paragraph which dam' near took my breath away. He gives his opinion of the aeroplanes which will stand the test of time and hindsight. After dribbling on a bit, and a name-dropping line-shoot about boozing with Adolph Galland in Hamburg one night, he quotes him as saying that the Me109 was not amongst the best because it was too tricky to land" and that constitutes a fundamental flaw for a service type." And then, here it comes, back to Farley: "Not for me the Hurricane either, because, unlike the Spitfire, it was not developed to its full potential."

Well, maybe it's my fault; perhaps I'm too sensitive about the Hawker Hurricane and maybe some of you will have no comment to make on Farley's viewpoint. So let's take that dreadfully overrated aeroplane, the Spitfire, first. Those who flew it, and I flew a number of its Marks, will remember the long engine cowling that stretched ahead of the windscreen denying you forward, and downward, view, especially when approaching to land and while taxiing. OK? Compare that to the Hurricane with its raised cockpit and far better forward view. But much more important; back down memory lane to the early 1930s.

The time had come to produce a high speed fighter aircraft. The days of the biplane were over; the low wing monoplane had to be introduced. But Hawkers had never produced a monoplane fighter and so Chief Designer Sydney Camm and his team had to start from scratch. Their work was exemplary - brilliant. They got it right; and what a responsibility! The Hurricane made its maiden flight on November 6th 1935 and George Bullman, the Company's Chief Test Pilot, expressed his delight in the aircraft's handling and performance; and so did the RAF's test pilots. Sopwith authorised immediate preparation for production without waiting for a Government order, so pressing was the threat of war. In 1940 Hurricanes accounted for more enemy aircraft losses than all our other defences, yes, Spitfires included. Pause for a moment. If there'd been a problem with the Hurricane and its production delayed for any reason, the German Air Force would have shot the few Spitfires we had out of the sky or blown them up at their airfields. Invasion from Germany would have followed. Think of the havoc, the terrifying damage and destruction to our fair land.

Now how does the Hurricane stand in the test of time and hindsight? You choose. But why did he write this? Well, the dear old lad is a great one for argument; loves an argy-bargy. You can almost hear him thinking, what will upset old goons like Crampton? I know, I'll write something about the Hurricane that could be taken as derogatory; bound to set the old idiots off. But no, on reflection it could not have been like that. Now I'll tell you what Farley's really like.

Forgive the personal and delicate nature of what follows. In February last year my darling wife died. I nearly went to pieces I adored her so. Shortly afterwards Farley rang and asked how we both were, and so I had to tell him. He detected my distress and said, "I'll be with you in an hour." Not for him the question, would you like me to call? Tomorrow? Next week, perhaps? An old Hawker mate was in distress so he immediately stopped what he was doing, and Farley does not do just one thing at a time, he does at least six. And he duly arrived, simply to give me company. It's the loneliness that kills under those awful circumstances, and he knew it. That's the man, and you should know it. And now you do.

No, clearly the poor fellow must have been ill to write what he did about the Hurricane. His illness robbed him of his memory about the Hurricane's history. Maybe he'll drop that dreadful Hurricane paragraph at the book's second printing and replace it with a song of praise for the men who designed and built the aircraft. They saved our country.

In the rest of the book Chapter 16, General Aviation Thoughts, is nearly the best of the book and all who have their own aircraft, or are thinking of buying one, MUST read it. There should be a law against anyone in the future getting a Private Pilots Licence if they have not read it. So, I'll forget about the Hurricane thing and give him Ten out of Ten. It is the best book about flying you will ever read.

(See also BOOK REVIEWS, pages 7-8)

ROYAL AIR FORCE CLUB VISIT

On 15 October Chairman Ambrose Barber and Duncan Simpson hosted a visit to the Royal Air Force Club in its beautifully appointed building at 128 Piccadilly. The day, for the twenty lucky Members who came, started with a talk in the "Hodges Room" by Wing Commander Mike Gilbert, author of the definitive history of the club.

Lord Cowdray, Britain's first Air Minister whose son had been killed in the RFC during WWI, suggested forming a club for RAF officers and generously offered to buy the £100,000 leasehold of a 128 Piccadilly, give it to the RAF Club and pay for its refurbishment; but in the end the bill came to £350,000. Built in the 1880s on the site of the Running Horse pub to house the Gillows Club (Waring and Gillows was an important London furnishings store), 128 Piccadilly became the Lyceum ladies' club before it was bought by Lord Cowdray in 1920. The RAF Club opened in 1922.

Between the wars the RAF shrank from being the world's biggest air force to one of the smallest so seriously reducing the number of potential member officers. The problem was exacerbated because most officers were serving overseas in Egypt, India and Iraq with only a few in the UK. The Club was also for gentlemen only; no ladies or families were permitted to enter thus reducing its attractiveness. The Committee consisted of stuffy 'clubbable' types who were quite satisfied with the status quo so the Club was not appealing to the younger, married, officers. In the 1920s no paintings graced the walls but there were plenty of hunting trophies further reinforcing the old fashioned atmosphere. Eventually ladies were allowed in some parts of the Club, but they were not allowed to enter by the front door; round the back was a sign over a door saying "Dogs, Luggage & Ladies."!

Consequently between the wars, and especially during the Great Depression, the existence of the Club was precariously hand-to-mouth. The expansion of the RAF in 1936 did little to help but the war transformed the situation; the Club was packed. However, in the pervading wartime atmosphere there was little maintenance or development. The post-war feeling of optimism brought new members; in fact numbers were capped to match the capacity of the dining room. Members were mainly from the General Duties (flying) branch, others were rationed.

However, by the 1950s the Club was no longer thriving, being out of tune with potential members because the Committee was filled with old, high ranking MoD types; younger officers were not represented. Both the RAF and society as a whole were changing with respect to equality of women. This was recognised in the Service but not in the Club, women remaining unwelcome right through

the '50s hence the Club was of no interest to young, married officers. The Committee felt they could not change things without the approval of the Annual General Meeting, but who attended the AGM? More high ranking, conservative types! The Club was within four years of bankruptcy and the Committee's solution was to look for a developer who would buy and demolish the building (this was the Philistine late '50s, remember) making one floor available to the Club, and then put the membership fees up.

At this point two senior officers, Neil Cameron and Bob Hodges (later Marshal of the Royal Air Force and Air Chief Marshal respectively), decided that something had to be done to save the Club and instituted a 'colonels' revolt'. They successfully canvassed all the Air Officers Commanding (AOCs) saying the Service must take control and make the Club relevant. The Club agreed to hand over the Chairmanship to Cameron who set up a steering group to put the Club back on its feet. They revolutionised the finances where half a day's pay was deducted at source from all who joined. Senior officers were urged to join who then might 'suggest' to the more junior that it would be a good career move to join too. It was also decided to build up a collection of aviation paintings of value. By the end of the 1960s 90% of serving officers were members and all restrictions regarding women had been removed. Unlike most London clubs the freehold of the building is now owned by the Club, a registered charity, half the cost coming from RAF central funds. This puts the Club in a good position in spite of the continuing reduction in size of the RAF. The Club is now 'family-friendly' and runs a large social calendar.

In conclusion Mike Gilbert thanked the Hawker Association for all the effort that had gone into the Camm bust and hoped that those present would enjoy their tour of the building.

Duncan Simpson then said a few words about the origin of the Camm bust project. He had suggested to Geoff Claridge, the Club Chairman, that it would be a good idea to get a bronze bust of Sir Sydney next to that of RJ Mitchell, who was already there together with Roy Chadwick, Barnes Wallis and Frank Whittle. Claridge agreed and Duncan took the idea to the Association committee. Chris Farara proposed that Ambrose Barber be put forward as the sculptor and two years later the bust by Ambrose was in place together with the information panel compiled by Chris. The Hurricane painting over the bust was added later.

In two groups, led by Duncan and Ambrose, the party was taken on a tour of the building to see part of the huge collection of aviation paintings, the heraldic squadron badges numbering several hundred, the new stained glass window, and the Camm bust, the principal object of the visit. The window depicts a number of aircraft and events from RAF history, and Members will be glad to hear that the main panel features a Harrier. Pictures by many famous aviation artists, such as Frank Wootton, David Shepherd and Michael Turner, are on display and many are of famous Hawker types, the most recent acquisition showing a Harrier GR9 over Kandahar airfield. On the ground floor gallery was the Camm bust, below it the information panel about Camm's career and the aircraft designed by him or under his direction, and above it the Hurricane painting. The whole is in an alcove with the Mitchell display which concentrates only on the Spitfire whereas the Camm display lists his 48 types (from Woodcock to Harrier I, of which some 26,500 examples were built) with photographs of eight of the most famous.

After a drink in the spacious bar and an excellent sandwich lunch in the "Hodges Room", Ambrose told the story of the Camm bust. Firstly a small scale nine inch fired clay 'maquette' was made by Ambrose using photographs, some of which were from the Brooklands Museum. This was submitted to the RAF Club arts committee who gave the go-ahead. Ambrose then set about the full scale bust building it up with clay over a wire 'armature'. At the Windsor memorial service to Sir Sydney his granddaughter, Liz Dixon, agreed to visit Ambrose's studio to see the work in progress. Initially sceptical she warmed to the project and helped with family photographs and useful comments. On completion of the clay model a bronze was cast using the lost wax process.

At the foundry the clay original was covered with latex rubber in two halves so the join was down the sides. On removal the two halves of the female rubber mould were reunited and molten wax poured in. The mould was rotated to give a constant wall thickness of wax, the rubber peeled off and the wax effigy fettled and cleaned. The wax effigy was then sprayed with a ceramic mixture which, when hard, was heated and the wax poured out, or 'lost'. This mould then had to be divided into a number of sections depending on the size; in this case four. Molten bronze was poured into the suitably vented moulds and the resulting castings welded together. After fettling the complete bronze was patinated with acid to give the required colour. Liz Dixon was very happy with the result and later unveiled the bust at the RAF Club on 27 February 2007. (See Newsletter 16).

RESTORING AND OPERATING HAWKER BIPLANES

Guy Black of Retrotec and the Historic Aircraft Collection, his firms that specialise in restoring Hawker biplanes and operating them, came to Kingston on 11 November to tell us about his life and work. He was apprenticed to Weslake engineering, racing car engine designers and builders, became involved in racing car restorations and formed Lynx Cars Ltd which restored and built replicas of Jaguar sports-racing cars. He sold the Company in 1995 to concentrate on aircraft, founding Aero Vintage Ltd, now named Retrotec.

For his first project he wanted a simple type to build and chose the Sopwith Pup, for which he got drawings from John Crampton at Kingston in 1977. He also found a LeRhône engine. Unfortunately the aircraft was lost when the Shuttleworth CTP, who was rather short and had refused a cushion, stalled it 100 ft. Having found a Frog flying model Hart in an attic Guy was inspired to find a Hawker biplane to restore so bought for £100 the rather roopy remains of a Nimrod I from the RAF Museum reserve collection. The tubular framework stainless steel joining plates were all in good condition, but that was about all.

As for drawings, he found some of the larger C and B size ones in Denmark but not the D size GAs or the small As. So, he set up a DO. BAe at Farnborough would let him look at drawings they still had but would not let them be copied for fear of product liability implications. However, by subterfuge it was sometimes possible. By "getting into the minds" of the original designers the DO was able to make an intelligent guess at the detail designs.

A manufacturing problem was presented by the Hawker fuselage construction method: high tensile steel tubes with squared ends joined by steel plates attached using tubular rivets, ferules and distance pieces. No welding was employed because the Ministry specified that repair overseas under primitive conditions was to be possible. To square the tubes a machine was built from a photograph of the original HAL machine. In a South African scrap yard a quantity of various Hawker airframe parts and material was found including some wheels in mint condition. He found an ex-HAL hexagonal spar rolling machine and got the steel strip for the spars made in Switzerland. Originally Guy had intended to sub-contract some of the restoration work but Aerovintage ended up doing everything because of the poor standards existing in these firms.

Engines, Rolls-Royce Kestrels, are rare and there are no spares available, although the Dutch Air Force has some but they can't be got out of the stores. However, Guy found ten engines in dreadful condition so he went to museums to swap these, plus a 'sweetener', for examples of restorable ones. Again, unable to find a high enough quality contractor all engine rebuilds are done in-house. R-R had made things difficult; the Kestrel was complex and parts were not interchangeable. For example the Daimler Benz engine in the Me109 has one third the number of parts in the Merlin, of which the Kestrel is essentially a two thirds scale version. Also, R-R destroyed all the drawings. Using specially made tools it takes about three years to rebuild a flight-worthy Kestrel. Even magnesium alloy supercharger impellers had to be made, special sparking plugs had to be ordered from Lodge (£30,000 minimum charge so they have plenty at about £70 each!) and plug leads and braid specially made.

A master at discovering original parts, when on family holidays Guy searches out local scrap yards. In Australia he found a crate full of sparking plugs and in South Africa discovered another Nimrod I, a Nimrod II and a Fury together with a Fiat CR42, a Miles Master and some Harvards; but the Fiat and Master ended up down a mine shaft before he could save them.

There were no 'pilot's notes' or other flight data available for the Nimrod I, so Guy took Viv Bellamy's advice, "Just go!". The first flight on the aircraft, which had been restored by only fifteen men aged 55 to 60, went well. From its Paddock Wood, Historic Aircraft Collection, base it attends air shows throughout the year. Guy's Nimrod II was completed in 2006 as reported in NL 16, Spring 2007.

Four Hinds had been found in Kabul, and the Afghan Government had given them to the RAF Museum, the Shuttleworth Trust and the Canadian National Aviation Museum who got two. They gave one as pay for restoration of the Museum example. Guy offered the Canadian a set of Fury components for the Hind and he agreed. Back in England the Hind was found to be free of corrosion and was essentially complete except for the engine and cowlings. Restoration of L7181, the serial number found on a strut dated 29.7.37, is currently under way. Guy's Fury should fly this year, 2009, after a six year restoration.

Retrotec use original parts if possible but otherwise strive to make new parts using original material specifications by original methods, tools and machines. Sometimes this is not possible as material specifications have changed so modern equivalents are used. If not available in original form tools and machines to the original designs are recreated from photographs if there are no drawings. Modern health and safety rules sometimes preclude using original materials, seat belt webbing, for example, and fire walls which used to be asbestos-aluminium sandwiches.

The vote of thanks was given by Duncan Simpson who quoted Sir Sydney Camm as saying, "I love the 'art.'" How pleased he would have been to see his beautiful biplanes being restored so meticulously.

CHRISTMAS LUNCH

Ken Batstone reports on the Christmas lunch....

On Wednesday 10 December 2008 sixty Members and guests attended the sixth annual Christmas lunch at the YMCA Hawker Centre. The diners gathered at 12.30 pm for drinks and socialising before the meal was served at 1.15 pm. The hall and tables were most attractively decorated and laid out and when all were seated the YMCA staff served the three-course meal. As in 2007 the traditional Christmas food was of excellent quality and was thoroughly enjoyed by all. After the meal the Chairman, Ambrose Barber, and President, John Glasscock, gave short addresses with appropriate toasts. To round off the afternoon the Christmas raffle was drawn resulting in six diners going home even happier than the other fifty-four! The Association thanked the YMCA staff for producing such an enjoyable afternoon and expressed its gratitude in the usual remunerative manner. We all now look forward to the next Association dining event; the Summer Barbecue in June which we hope will be held in warm sunny outdoor conditions.

Editor's Note. Ken was far too modest to mention that he was responsible for organising the event, negotiating with the YMCA and running the raffle; no simple task. The Association thanks him warmly (and hopes he'll do it again this year!).

HARRIER SALES TO CHINA

Dick wise has been doing some fascinating delving into the past...

Whilst researching at the National Archives, Kew, I came across a file released in December 2008 under the thirty year rule. It was marked PREM16/1535 - Anglo-Chinese Relations, The Sale of Harrier Aircraft to China. This Cabinet Committee file provided an interesting snap-shot of government thinking and actions between October 1977 and August 1978. The file, about an inch thick, was a mixture of memos, minutes, speaking notes, telex copies and visit reports; a fascinating collection of papers recording how government attempted to balance conflicting foreign policy and economic issues. It also demonstrated the potential impact that sales prospects have on government policy, causing engagement at the highest levels of government.

Initial UK Government motivations were driven by strategies to oust the French from what was perceived as growing trade relations with China. The Foreign Secretary, David Owen, was of course concerned about the impact of a UK-China relationship on President Carter's US administration and the COCOM (Co-ordinating Committee for Multilateral Export Controls) nations. The Prime Minister, Jim Callaghan, commissioned a study to analyse the economic, military, industrial and political implications of a sale such as that of the Harrier. The study report recommended the development of a Western policy that would enable China to stand up to the Soviet Union whilst encouraging her to moderate her inclination to work against Western interests world-wide. Therefore, it stated, the UK should promote arms sales to China and press the COCOM nations to agree.

A visit to China by the Chief of Defence Staff Sir Neil Cameron, where the Harrier was discussed, caused a major stir due to his poor choice of words regarding the threat posed by the Soviet Union. His comments, together with rumours of a potential Harrier sale to China reinforced by an invitation for a Chinese military delegation to visit England, aroused concern within the Soviet leadership. This in turn produced an abrupt cooling of London's relationship with Moscow.

John Farley, in his recently published book, 'A View from the Hover', describes flying a Chinese pilot in the Harrier during the 1978 Farnborough air Show. Having a better understanding of the UK Government's policy challenges at that time made his account even more interesting. Will more be revealed when the 1979 files are released by the National Archives?

A TRIBUTE TO KINGSTON'S AIRCRAFT INDUSTRY

The following charming 'poem' was the prologue to the St Luke's Church of England Boys' Secondary School pageant, in 1963, entitled - "Dunstan Crowns a King"; writing worthy of Scotland's William McGonagall, author of 'The Tay Bridge Disaster'.

1. To Dunstan, prelate to Saxon Kings,
Came dreams of engines and flying things,
That theynes and monks laughed to scorn,
But, here in Kingston planes were born.
2. The 'Pup' emerged from Sopwith's brain,
The 'Camel' and 'Cuckoo' stood the strain,
When Kingston's eminent engineer
Made England's Air Force one to fear.
3. We did not lack the fearless few,
To fly and test each engine new,
For Harry Hawker's daring deeds,
Made people wonder at such speeds.
4. Then Sidney (sic) Camm applied his skill
To combat despots, with a will,
Which changed the erstwhile peaceful 'Hart'
For Hawker 'Hurricanes' to play a part.
5. These Air Force fighters, in '41,
Against dreaded bombers they had gone,
To drive, from skies with searchlight streamers
The Luftwaffe and its tons of screamers.
6. So, soon, the drones were in retreat,
And cannoned Hurricanes spelt defeat,
To tanks and armour, vainly bent
To plug the gap that 'D Day rent.
7. The flying bombs met the 'Typhoon'
Produced by Hawkers, just too soon,
To let the Nazis make more gaps,
Among our nurses and wounded chaps.
8. The 'Tempest' joined in this affray,
Until, at last, there came the day,
And Humble's 'Fury' now at rest,
Brought due reward to Kingston's best.
9. What would become of youth and girls,
Whose precise work our tale unfolds,
Who here, in Kingston, with manual art,
Had played, in war, a vital part.
10. The restless brains of each designer,
Now turned to making something finer,
And swept back wings were duly set,
Spedded forth by Hawker's jet.
11. This soared aloft and changed the tone
To supersonic whine, not drone,
No throb, a tune, the engine's note,
Tremendous thrust from a burning throat;
12. Now faint, now high and now a scream
Was this creation 'Dunstan's' dream?
Realised in England's glory
And now a part of Kingston's story.
13. No. No. To scatter hounds of war,
Sidney (sic) Camm proved what he saw,
And Hawker 'Hunter's' through the sound,
Now England's safeguard 'gainst the hound.
14. Who dares to challenge the 'Flying Ace'
And create war against his race,
While Neville Duke, unheard, unseen,
Honours his country and his Queen.

DEMONSTRATION FLYING AND THE SBAC SHOW

The following piece was written by Neville Duke, but as far as the Editor is aware, was never published. It was found amongst his papers. The article was undated but probably dates from the mid-fifties...

The annual air display organised by the Society of British Aircraft Constructors is unique in the aircraft world. It is an occasion when all British firms engaged in the construction of aircraft or ancillary equipment show statically, or demonstrate in flight, their latest products. It is primarily a business enterprise of a private nature and invitations to attend are extended to selected persons throughout the world. The character of the show has changed somewhat since its inception and is now a public display for three days out of the total seven. The event, therefore, consists of the demonstration of an aircraft's capabilities before 'flying' people on the first four business days and of an air display on the public days.

From the pilot's point of view the requirements on the two occasions are entirely separate. The technical visitors are not necessarily interested in a show of piloting skill but appreciate more the presentation of an aircraft's performance, such as short take-off run, rate of climb or acceleration, rate of roll, manoeuvrability and high or low speed handling. The public days require a different approach in that the average visitor will probably not fully appreciate the advantage of many of the above manoeuvres and will not, for example, be excited by a short take-off or landing run. Such days are an occasion more for display both of the aircraft and pilot in aerobatics and dashing manoeuvres. For this reason the public days are popular with pilots and also, being at the end of the week, they have fallen well 'into the groove' and their timing and positioning should be at its best.

In a demonstration flight of this nature there are several important factors which make or mar a display. The pilot must obviously know his machine and its capabilities to the finest degree. The low level at which aerobatics are carried out leaves small margin for error and hours should be occupied with practice, at a safe height, perfecting manoeuvres and finding, for example, the right speed needed for loops and the minimum height required in the looping plane to carry out the performance in case of low cloud. A carefully practiced routine is essential in order that not a second of the very limited available display time is wasted.

Aerobatic manoeuvres should be planned beforehand so that one manoeuvre leads into, and positions the aircraft for, another and a neat and varied sequence results. Whilst a practiced routine should invariably be used as the basis of a display, the event should be elastic. The pilot should be able to revise his programme in view of prevailing weather conditions in order to avoid poor positioning due to the presence of low cloud. The placing of various manoeuvres should be done correctly, before the centre of the crowd. The sun is an important item and display into sun or up sun, from the spectators, should be avoided. The wind direction can cause a ragged performance if manoeuvres are carried out across a strong wind when drift will occur and lead to bad placing or untidy results. So far as possible it is preferable and neater to carry out the display up and down an imaginary line in front of the spectators or up and down a runway if available, using it as a positioning line.

Fast low level runs attain maximum effect with a longish, straight and low run-in parallel with the spectators and approximately fifty yards out. It may be of interest to know that during these fast runs at well in excess of 700 mph the pilot is not unobservant of details. As an example, in this year's SBAC display I observed during the first fast run in the Hunter variant a photographer standing directly in the line of flight. A few minutes later during the second fast run the same body was in the same place, presumably preparing to take a further photograph. This time, however, whilst at range he lowered his camera, stood his ground for a short while and then ran as I closed with him, tripping over and rolling all of a heap in his rush to get out of my way.

It makes for a more polished display if each manoeuvre is clearly finished and a slight pause made before entering into another, eg after a slow roll the aircraft should be held level, if only for a second or two, before going into a turn or some other

aerobatic. As a general rule it is poor flying to perform over the heads of the crowd for obvious reasons of hazard, besides being somewhat 'neck-breaking' for them. It is bad showmanship, too, to fly behind the observers or be obscured by buildings. A display should be easily and comfortably seen by the majority and the aircraft kept in their sight the whole time if possible. High speeds make it difficult to avoid disappearing from view occasionally but every effort should be made to keep 'local'.

In few other forms of display is the maxim 'practice makes perfect' more pertinent and hard conscientious training is essential. Assuredly it will be seen that display flying can become an art giving equal pleasure and satisfaction to pilot and audience alike.

ACES, ERKS AND BACKROOM BOYS

Harry Fraser-Mitchell recently came across a copy of 'Aces, Erks and Backroom Boys' by Edward Smithies (published by Cassell PLC in their Military Paperbacks series), now out of print, and noticed that it contained material of great interest to Association members. Harry has obtained permission for extracts to be quoted in the Newsletter. This a second instalment (see Newsletter 17)...

Tom Clare joined Hawkers at Kingston as a metal-worker in 1928.

"Conditions in the factory in those days were pretty rough. The tooling was very bad. All these young lads were doing their little jobs, bits and pieces, and there was no planning as we know it today, no paperwork. There was nobody to show you anything unless you had a word with the chap next to you; if he knew anything about it; if he would tell you! Nothing big about it at all. At one point they had a clear-out and there was only eight people left on the plane floor!

When I went there, the only aircraft was rag and string. That was the pattern of it. I remember Tommy Sopwith, with a blooming great cigar, come round smoking, overcoat and mac on, asking us why we were cold! Ooh yes, Tommy Sopwith! They had an old car. When Sir Frank Spriggs and HK Jones, who came in when Tommy Sopwith went into liquidation, wanted to go out up to town, fitters off the bench used to have to rush downstairs, put on their chauffeur's hat and drive them up. That was how poor it was.

The machine shop was nothing but belt-driven machines; no automatics. If you was within range when a belt broke you caught it. Old Sawbone Nightingale was the bloke who came round with the adhesive to stick on the belts when they broke. I've never seen hands like it. He didn't clean 'em, he just put them on the grindstone. I've seen him go up to the forge, upstairs where the blacksmith was, and he'd got the old coke fire like a blacksmith would have, the old bellows. Sawbone'd come in there and pick a bit of red hot coke out and light a fag, his fingers smoking with all the grease; they were black with thick callouses.

No craft distinction then; you did what you were bloody well told unless you wanted the sack, because plenty of people outside wanted your job. That was the big incentive, the sack! They didn't want to over-labour at all. In the early days it was nothing for them to come round on a Friday afternoon and give a couple of dozen people an hour's notice, or two hour's notice. I was looking at that one time. We were very shy of work and the charge hand hadn't got a job for me for a couple of days.

In 1935 we started building the Hurricane. I made the first rib for it. They put it in the first test rig that was ever made; and that was a funny old thing. None of the paraphernalia that there is today of gauges and God-knows-what; it was just weights and stuff stretched on it; loads put on it. Very elementary.

When I first went there was no smoking allowed in any shop; they used to go down in the toilet. You were booked in. Archie was a one-armed bloke in there and if you slipped him a fag through the window when you gave your number - he had to write it in a book - he'd let you smoke. There were stable doors, half doors. Later on when I became Assistant Foreman you were allowed to use three other toilets. They were locked, with full doors, and you had a key. That was class distinction!

There was always somebody up to a lark; always a bit of devilry among them. If you'd got caught you'd have got the sack. But today they lack, I dunno, the spirit that was there. Anybody would have helped the other one. If a bloke was in trouble somebody would help him out. There was always a lark going on, a joke, somebody playing a trick on somebody - putting spurs on the back of their heels or a notice on their back, or painting their heels. Some blokes would go up the road and find their heels were painted bright yellow. But there was always a good spirit among us! It was always friendly; nothing vicious about it.

You weren't allowed any breaks in the mornings; you weren't even supposed to have a drink though we used to take flasks and they knew we did - we used to keep it out of sight - and perhaps a jam sandwich, or marmalade, or whatever you could afford, and you had that somewhere about tennish, on the quiet. Look round and make sure - put it in the drawer away somewhere, put the cup down there and hide something over it. And that'd be the way it went. Then they agreed you could have a tea break for ten minutes and they came round with barrows. Of course the milk cartons on there were handy things to roll up and throw.

When I had a five-pound in my pay packet, it was out of this world. That was for working weekends and two night's overtime a week and Saturday and Sunday."

BOOK REVIEWS

Tony Buttler's latest book, '**Sea Fury in British, Australian, Canadian & Dutch Service**' is an essential volume for anyone interested in Kingston's best and last piston engined fighter. Very well printed and illustrated - the designer is to be congratulated on not bleeding pictures across the fold - this excellent book covers the type's design and development, service career highlighting the Korean War, recollections by a number of well known naval aviators and a technical description. Appendices give technical data, list squadrons and units, describe the Sea Fury carriers, and for the modeller, artist or enthusiast there is a large colour section of side elevations and plans. A final appendix gives a concise production and service history of every Sea Fury built. The book is copiously illustrated with black and white and colour photographs, most of which have not been published before or collected together in one place; buying the book is worth it just for these. It is published by Dalrymple & Verdun in softback at £24.95 (ISBN978-1-905414-11-6).

John Farley's memoir, '**A View from the Hover - my Life in Aviation**', has been praised elsewhere in this Newsletter, but the Editor can't resist adding his two-penn'orth. This big book (428 pages) is far more than what the title suggests. It does recount selected parts of John's long career, which forms a foundation to the book, but it also provides an insight into the clear and logical workings of an engineering test pilot's mind. Every part of this work reveals to the reader truths about aeronautics that he had never considered or of which he had only, he now comprehends, a somewhat hazy and incomplete understanding. At the same time the book entertains (at one point reducing me to helpless laughter) and is a text book! Clearer explanations of lift, drag, wings, stalling and spinning would be hard to find. John also tells us about instrument flying, simulation and materials, general aviation and of course what it was like to fly the

many types he tested over the years. What a tour de force. Buy the book, read it, and I guarantee you will return to it time and time again, finding just what you want because of the thoughtful way John has laid it out. It is a Flyer Book published by Seager in hardback at £32.95 (ISBN 978 0 95327 52 0 5) and somewhat cheaper in softback (ISBN 978 0 95327 52 5 0).

MEMBERSHIP & HAWKER PEOPLE NEWS

We welcome new Members Peter Amos, Donna Ferguson, Kelvin Richardson and Hilda Wilson.

Sadly we record the deaths of Bob Coles, Trevor Jordan and Doug Reallf, and send our condolences to their families and friends.

Many will remember Bristol's and Rolls-Royce's Ian Milne who died recently aged eighty. His long career included the positions of Chief Performance Engineer, and later Chief Engineer, Pegasus (succeeding John Dale).

MEMBERSHIP LIST FEBUARY 2009

A: Mike Adams, Ken Alexander, Peter Alexander, John Allen, Martin Alton, Peter Amos, Terry Ansty, Alma Apted, Steve Apted, John Arthur, Alan Auld, Bryan Austin, Mike Azzopardi. **B:** Brenda Bainbridge, Arthur Balchin, Colin Balchin, Ambrose Barber, Paul Barber, Ray Barber, Derek Barden, Peter Barker, Geoff Barratt, Graham Bass, Ken Batstone, Dennis Baxter, Colin Bedford, Anne Beer, George Black, Guy Black, John Blackmore, Keith Bollands, Paul Boon, Betty Bore, Pat Bott, Steve Bott, Bob Bounden, Alan Boyd, Pat Boyden, Phil Boyden, Roy Braybrook, Clive Brewer, Laurie Bridges, Doug Britton, Arthur Brocklehurst, Capt. 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