THE HAWKER ASSOCIATION

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EDITORIAL

I have to report that some **80 'Members' have not paid their subscriptions for 2013**. Barry makes it so very easy for you but you have failed to send him the paltry £5 you owe! Your names are in **bold** on the back page with his address.

Interest in Sopwith and Hawker aircraft continues to grow and the Hawk continues to sell, as you can see in Aircraft News. I had a look on the internet recently to see if there were any Harriers for sale. I was surprised to find two GR3s, a GR5, a GR7, a GR9, a T4N, and a T10, all being restored for static display; and an FA2 ready to fly and with a spare engine! Google Everett Aero for full details.

Please continue to send contributions, preferably by e-mail, to The Editor, Chris Farara, 24 Guildown Road, Guildford, Surrey, GU2 4EN, tel 01483 825955, e-mail cjfarara@ntlworld.com.

PROGRAMME FOR 2013

Wednesday 11th December	**CHRISTMAS LUNCH.** 12.30 pm, sit down at 1.00 pm.

PROGRAMME FOR 2014

Wednesday 8th January	Social & Quiz - **Les Palmer**.
Wednesday 12th February	Circuit of Britain 1913 & 2013 - **Jeff Boyling**.
Wednesday 12th March	Fifty Years of Flying - **Bernie Scott.**
Wednesday 9th April	11th **Annual General Meeting**

To book for the Christmas Lunch please contact Ken Batstone on 01932 229938. The price is £16.50 for which you get a choice of starter, main course and desert, a glass of wine and coffee or tea… and a mince pie. Drinks are available from the bar. Please send cheques payable to the Hawker Association to Ken at 42 Kings Road, Walton on Thames, Surrey, KT12 2RA.

You all know **Les Palmer, Jeff Boyling** recreated Harry Hawker's Circuit in his Catalina, and **Bernie Scott** was a Dunsfold TP after an RAF career.

AIR TRAINING CORPS HELP REQUESTED

Flight Lieutenant RAFVR(T) Ray Yee, Officer Commanding 328 (Kingston-upon-Thames) Squadron of the Air Training Corps, is on the lookout for volunteers to help out with talking to the cadets about airframes, propulsion, airmanship, communications, satellites and space travel, or anything else). No experience necessary just, bags of enthusiasm! They meet at the Territorial Army Centre, Portsmouth Road, Kingston-upon-Thames, KT1 2QX.If any Members could help Ray, or knows someone who could, please contact him at oc.328@aircadets.org or by telephone on 020 8549 8809 or 07958 275111 mobile.

AIR MARSHAL SIR REGINALD HARLAND KBE, CB, AE

Members will remember Reg Harland, who was the MoD Project Director for the Harrier from 1967 when the type entered RAF service. Sadly, he died in July, aged 93, after a life-long and wide ranging, RAF career.

AIRCRAFT NEWS

SOPWITH 1 ½ STRUTTER - A flying 'replica' being built by the Aircraft Preservation Society of Scotland is nearing completion at East Fortune, Edinburgh. It will be powered by a 150 hp Rotec 3600 radial engine.

SOPWITH PUP - Restorer Larry Howard of Spokane, Washington, is building a flying replica using Sopwith drawings. The engine is an original 80 hp Le Rhone rotary.

HART - Guy Black's Retrotec company in Sussex is constructing a flying, Bristol Mercury powered, Swedish Hart for Swedish enthusiast Joakim Westh using parts recovered in southern Sweden in the 1980s. A Mercury engine is available.

HURRICANE - A Canadian-built Mk XII is being rebuilt to fly at Thruxton.

GNAT TMk2 - XS105 was destroyed in a fatal crash in July near Georgetown, South Carolina.

HUNTER - FMk6A XF475 has been restored at the Boscombe Down Aviation Collection, Old Sarum, in its red and white Empire Test Pilots' School livery. FMk2 WN904 is on show at the Sywell Aviation Museum, Northants, together with a sectioned Armstrong Siddeley Sapphire engine. FMk1 XE606 has been restored in 8 Squadron colours and now stands outside that unit's headquarters at RAF Waddington.

HARRIER - TMk8 ZB603 has been presented to the Fleet Air Arm Museum. As a TMk4N it was the Navy's first Harrier two-seater. It was converted to T8 standard in 1994.

HAWK - The Indian Navy has started to take delivery of 17 Hawks built by Hindustan Aeronautics Ltd making it the third navy to operate Hawk, after the USN and the RN. BAES has responded to an Indian Air Force request for proposal (RFP) for 20 Hawks for the national aerobatic team.

THE MUSEUM OF BERKSHIRE AVIATION

On the 4th September a group of Members met at the Museum of Berkshire Aviation at what was Woodley aerodrome, near Reading, once the home of Miles Aircraft Ltd., formerly Phillip and Powis Aircraft. We assembled in the shop and café anteroom and were given an introductory talk by the museum manager, Ken Fostekew, who accompanied us in the museum proper, explaining the exhibits. As the name implies, all aviation activities in the county of Berkshire are covered, although Miles activities are most prominent. Other companies represented include Fairey Aviation, who were at White Waltham, Elliotts of Newbury (EoN), Handley Page who bought Miles, Westland who took over Fairey, ML Aviation of Slough and the Sperry Gyroscope Co. of Bracknell.

Miles exhibits include: a beautiful Magister L6906, based on assemblies from Magister T9841, a Martinet TT1 target tug MS902 under restoration by museum volunteers, an M.100 Student jet trainer also under restoration, and a very impressive steel wind tunnel model of the M.52 supersonic project. From Fairey there are: a Jet Gyrodyne XJ389/XD759 (renumbered due to duplication),and a Gannet T.5 XG883 (outside). A Westland Scout XP849 in ETPS colours (a descendant of the Fairey Ultralight helicopter, a Handley Page Herald, G-APWA (outside), an EoN Olympia Mk1 glider and an Olympia 456 complete the main aircraft exhibits. There are very many more exhibits of great interest including large scale models of Miles and Fairey types, a model of the 1938 Fairey FC1 four engined airliner project (not unlike the DH Albatross), models of two Fairey projects, ML Aviation ejector release units (ERU) and a Chevaline UK Polaris guidance system by Sperry. It's possible to find somewhere a display, photographs or drawings of just about any civil or military aviation activity in the county - including a photo of our own Harry Fraser-Mitchell presenting a Herald item to the museum, and as Camm was a Berkshire man, he and his aircraft, in model form and with photographs, are also well represented.

SMART PROCUREMENT

On the 8th May Mick Mansell, BAES's retired Director of Future Systems, returned to Kingston to tell the Association about the new UK Ministry of Defence (MoD) acquisition process. Smart Procurement (SP) emerged from the UK Government's 1999 Strategic Defence Review when the problem of military procurement was studied by a joint MoD-Industry-Consultant team. Changes in the process were driven by cost and time over-runs experienced on recent major defence procurement projects - Nimrod, for example. Other drivers were: that defence equipment is becoming more complex and diverse so requires a flexible and short acquisition procedure; threats are less predictable than in the past so new technology must be deployed more quickly; and the consolidation of the UK and European defence industries.

The aims of SP were: to deliver projects within the time and costs approved when the major investment decision was made; to establish an MoD procurement process where military capability is acquired progressively at low risk and with optimisation trade-offs between military effectiveness, time and whole life costs; and to reduce the time taken to introduce new technologies into the front line to secure military advantage and industrial competitiveness. Key features of SP are: a whole life approach by a single Integrated Project Team (IPT); clear definition of 'customers'; trade-offs between performance, whole costs and time to be identified, evaluated and implemented; relationships with industry to be better and more open through partnering and common goal identification; new procurement approaches including incremental acquisition; shorter project approval and procurement processes; and higher investment during early project phases to reduce risk before binding performance, cost and time parameters are set.

Within the MoD the central relationship is between the 'customer' and the supplier. The 'central customer' is responsible for: defining the basic future capability requirement; for making the balance of investment decisions in and across capabilities; for obtaining project approval; for accepting the equipment into service; for developing specific equipment concepts to meet capability gaps; and for setting the IPT's budget for the procurement phase of the project. As the equipment enters service the 'second customer', the appropriate Commander in Chief, takes over the 'customer' lead and agrees with the IPT leader the level of support required.

The above is a summary of the core of Mick's talk which went into much greater detail of the component activities in the procurement process. If you would like to learn more please contact the Editor to whom Mick has loaned a DVD of his Powerpoint presentation which Members may borrow.

THE SOPWITH AIRCRAFT STORY

On the 9th of October David Hassard gave his lecture entitled "The Sopwith Story", compiled to mark the centenary of the foundation of Sopwith Aviation in 1912, to Association Members and to the visitors, including Tommy Sopwith junior, who had come to the Hawker Centre to celebrate the Kingston Aviation Centenary Project. After much research David has managed to identify all the Sopwith types and to relate them to each other in terms of design links and calendar time as well as collating production numbers. This he showed in an original and effective 'Powerpoint' presentation. He has also collected together from many sources numerous photographs of the Sopwith aircraft being built, at the manufacturers, and in service or on trials.

In its eight years of existence Sopwith Aviation produced more than 40 basic designs with many variants bearing 56 names. That is equivalent to a new one every twelve weeks. Some 18,000 Sopwith designed aircraft were built, mostly by licensees and contractors in the United Kingdom and overseas, the company itself building but 3,300 in Kingston upon Thames. Numbers of aircraft produced at Kingston indicate the growth of Sopwith's company: 1913 - 16, 1914 - 73, 1915 - 199, 1916 - 282, 1917 - 863, 1918 - 1320, 1919 - 560, when the war was over.

David explained how, in 1910 at the age of 22, Tom Sopwith, after teaching himself to fly, gained the 31st royal Aero Club flying licence. He took up competition flying and, with his mechanic Fred Sigrist, went to USA. In 1912, with their winnings, Sopwith set up the Sopwith School of Flying at Brooklands using standard contemporary aircraft. However, Sigrist thought he could improve upon them so he modified the Burgess-Wright they had bought in America. Also in 1912, Australian Harry Hawker joined the Company, was taught to fly by Sopwith and soon became the company test, demonstration and competition pilot. More importantly he joined Sopwith and Sigrist to form the unique and effective three man 'design committee', each with complementary skills. The first Sopwith design was the 'Hybrid' tractor biplane combining existing and newly designed components. This was so successful at gaining records with Hawker that the Admiralty bought it.

As there were by now several flying schools Sopwith decided to move wholly into aircraft design and manufacture and chose Kingston upon Thames as his site. With the Admiralty money he bought the roller skating rink as this provided a cavernous space, uninterrupted by pillars or other roof supports, and a flat, level, wooden floor on which designs could be laid out and structures built. As the company grew he would build a large new factory close by in Kingston's Canbury Park area and, in 1918, leased Government Aircraft Factory No.2 at Ham. (After the war Sopwith offered to buy the Ham factory but his offer was rejected by the Government in favour of Leyland who went on to build civil and military vehicles, Trojan cars, tanks and munitions. Happily, in 1948 Sopwith bought the Ham factory from Leyland as the principal Hawker production and design centre). Design and manufacture started in earnest in 1913 with the height record breaking 'Three Seater' and the 'Bat Boat', the first successful British flying boat and later, when fitted with retractable wheels, the world's first successful amphibian.

From here the speaker went through every Sopwith type on a year-by-year basis, illustrating each with excellent photographs, and highlighting particular design features and achievements. A very important type was the 'Tabloid' of early 1916 which set the pattern for all subsequent fighting scouts. As a seaplane it won the 1914 Schneider Cup in Monaco, the first time a British aircraft had won such a competition. It was developed into the 'Baby' and led to the 1916 'Pup' and 'Triplane' and the 1917 Camel, the most successful fighter of the war. In 1915 Sigrist produced his 'Bus' which led to the '1 ½ Strutter' in 1916 of which nearly 5,500 were built. The 'Camel' was followed by the 'Snipe' family in late 1917, and in parallel with the 'Camel' was the often overlooked 'Dolphin' of which over 1,000 were built.

After the November 1918 Armistice the demand for military aircraft reduced to zero. However, a number of experimental prototypes and one-offs were designed and built of which the most famous is the 'Atlantic' in which Hawker and Mackenzie Grieve came so close to making the first non-stop Atlantic crossing. However, it made national heroes of the crew. In 1919 a new Sopwith Schneider was designed and built for the race, and with a top speed of 160 mph was the fastest entry, but fog prevented the race from starting.

In 1920 Sopwith wound up his company to pay a Government bill for excess war profits. He sold land from his estate at Horsley and paid off every creditor in full. The same year Sopwith, Sigrist and Hawker started again when they formed the HG Hawker Engineering Company which became Hawker Aircraft Ltd whose success allowed Sopwith by acquisitions to create Hawker Siddeley Aircraft, Hawker Siddeley Aviation and the great industrial conglomerate, the Hawker Siddeley Group. Not bad for three young men in their twenties who wanted to build aeroplanes in the second decade of the 20th century.

This is but an incomplete summary of David's highly detailed and informative talk on which he must be congratulated. As Chris Farara said, when giving the vote of thanks, David really should write the book.

RAMBLINGS OF AN EX-HAWKER AIRCRAFT APPRENTICE

In the first part of his memoir Peter Ryans gives an insight into working at Hawkers in the early post-war years….

Part 1 - HAWKER

I left what was then Hampton Grammar School in 1948 and commenced a four and a half year engineer apprenticeship, with day release, starting at Canbury Park Road. After experience in the detail fitting, machine shop, heat treatment and tool room I was sent down to Richmond Road with an advance party and one or two main assemblies for the first production Sea Hawk.

Looking back at life in industry at that time presents quite a different picture to that of today. I find this particularly so in the world of 'health and safety'. Despite our often derisory comments in this field there is no doubt that things had to and have improved over the years. Some of the things that spring to mind include the open tub of molten sodium cyanide at the end of our work bench into which we would suspend small hand made tools and jigs before quenching to case harden them. There was Sandy leaning over the large trichloroethylene wing skin de-greasing bath, smoking, with a somewhat bemused smile on his face. The noise level in the area where Meteor rear fuselages were being riveted up, for either Gloster or Armstrong Whitworth, was incredible. Ear defenders? What are those?

I well remember significantly altering the contours of a large Sea Fury wing skin when attempting to lower it into a bath for anodic treatment and I happened to bridge the two bus bars supplying electrical power to the bath. A roll of black insulating tape got rid of that problem. I can only remember one occasion when my status as an apprentice was taken advantage of and that was when I was in the machine shop and had to sharpen router cutters for the following night shift. The work was mind numbing and after a couple of days they employed a woman to do this job. Sexist? On another occasion in the machine shop a mill operator had a serious accident when he slipped on the oil soaked duck board in front of his machine and fell into the rotating cutters. It is hard to believe now but it had not been all that long beforehand when the machines in that shop had been individually driven by leather belting from overhead common shafting.

The Sea Hawk advanced party was initially located in the Richmond Road factory in what I believe was the south west corner of the building (the main road end, not the river end) since Leyland was still occupying the remainder of the factory. There were of course no offices at this end at that time. Leyland was gradually clearing floor space as it was completing the assembly and despatch of the last of a tank transporter contract. Soon we had the Sea Hawk front, centre and rear fuselage assemblies, each on their respective trolleys. Once Leyland had cleared most of the floor space we moved about half way down the factory and the process of assembly began. Whenever Navy brass visited Richmond Road to view their new aircraft we used to push the three fuselage trolleys together to give the impression of a complete unit. Soon we were joined by various other departments including Sea Fury wing jigs, coppersmiths and a rather rudimentary paint shop behind large curtains.

I won't go into any detail about the various problems we had or the personalities involved except to mention Bert Weedon and Wally Raynor who had moved in and occupied an office on the balcony. I was moved into Wally's office for a while to lay out a scale model of the factory floor with representative Sea Hawks, jigs and various departments, to help shoehorn everything in. I particularly remember at about this time acting as a guide to a party of de Havilland apprentices who were visiting us from Hatfield. At the wash-up they said they were particularly impressed with the standard of surface finish and riveting on the air flow surfaces. After visiting Hatfield a few years later on a Comet course and with subsequent Vampire and Venom experience, I could appreciate the visitor's comments.

I consider that the experience I gained during my time on the assembly of the first Sea Hawk was invaluable. We all worked as a team with the trade boundaries becoming decidedly blurred on occasions. There were often instances when assembly drawings did not quite match up to reality and Jimmy Wild was a frequent visitor from the Design Office to sort things out and make the odd drawing alteration. It was also beneficial having the knowledge of the Rolls-Royce representative there as he brought the Nene, positioned nearby, up to the latest required standard. Once the aircraft was fully assembled and all systems functioned, short of running the engine, we removed the wings, loaded it on a couple of low loaders and off it went for its test flights.

After a while I went to Langley where I was employed on the structural test frame making tensile links and attaching them to the P.1067 Hunter specimen. I was still there when we had the first pull and the wing fractured (I believe it was the undercarriage girder which failed). However, with some beefed up material section and substituting 2BA bolts for some rivets, it sailed through the next pull. Reg's staff employed on the test frame also had the task of running up the engines of all the various types of aircraft held at Langley at that time (Hart, Tom Tit, Whitney Straight, Hurricane, extended leg Sea Fury and the Napier Sabre Fury spring to mind) which made for very interesting Friday afternoons.

I then assisted with the repair of Sea Fury wings damaged during carrier operations supporting ground forces in Korea. My last job at Langley was to attend the final Sea Fury maintenance course in the Service Department (run by John Gale and Len Hearsey) with the final batch of navy Petty Officers. The last six months of my apprenticeship were spent in the Design Offices back at Canbury Park Road. I remember one classic moment when a rather irate Sir Syd (Sydney Camm) came into the offices with a bunch of photographs from Kinloss showing the results of a Hunter Mk1 landing with a touch of drift on: the cockpit had broken from the fuselage just behind the cockpit rear bulkhead. A modification had been embodied post delivery to introduce a pair of whip antennae mounted in the fuselage skin just behind the cockpit canopy. Fine for communication purposes but not much good for resistance to side loading in this area of the fuselage which also accommodated the gun pack. I then had the job of checking the shear strength of the fuselage of what was our current venture, the P.1121 which had a rather large de Havilland Gyron planned for it. Another memory of this time is spending many hours doing performance and area rule calculations with John Fozard - of course all on a ten inch slide rule. I spent something like two and a half years in total in these offices before being commissioned into the Engineer Branch of the Royal Air Force. (To be continued)

APPRENTICE PEREGRINATIONS

Dave Lee, who recently joined the Association, remembers his time at Hawker, starting in the mid 1950s….

I am afraid that this collection of some of my remembered experiences is not particularly exciting as I was a mere craft apprentice, but it may stir the memories of others who were there in those times. I would also add that this is written from memory of times long ago and some of the dates and names may not be strictly accurate.

I went to the Richmond Road factory straight from school, Twickenham Technical College, in 1955. I worked as a shop boy from about September until the December or January while waiting for the next apprentice intake. I cycled from Isleworth to the factory and I could easily cross the Chertsey Road; try that now on a bike! The hours came as a bit of a shock after the nine till four at school; I think we started at eight in the morning and finished at six in the evening.

There were about ten of us that sat at a bench visually inspecting small parts for defects and we were supervised by a strict overseer who stood at the end of the bench keeping a very close eye on us. His name was Jim and he also worked part time as a steward in the Social Club, the same one that is now the venue for the Hawker Association meetings. We had to use a metal punch to stamp "HAL" on each part that passed. The factory was extremely noisy because Hunter wings and centre fuselages were being constructed. The main noise came from the compressed air riveting guns on the sheet metal but this was supplemented by the whine of the 'windy' drills and the high pitched scream of the routers that were milling out the centre fuselage spars from solid aluminium alloy. I don't remember seeing any ear defenders; what would modern health and safety exponents make of that!

I started my apprenticeship as an aircraft electrician in the winter of 1955/56 and was immediately posted from Richmond Road, where no wiring was being carried out at that time, to Langley, where Hunter rear fuselages, front fuselages and centre fuselages were separately wired then joined together to form the complete fuselage. During this period there was a coach laid on that took us from Kingston to Langley. This made for an even longer day because we had to start at the normal time at Langley so the coach left Kingston very early in the morning. I can't remember how long I was at Langley but eventually wiring operations were transferred to Richmond Road and production at Langley was run down. A group of us apprentices was apparently forgotten because we were left in the empty factory after the workforce had gone.

One incident of note occurred during this twilight period. Hawker had their private fleet of historic aircraft at Langley, among them the Hurricane "The last of the Many", an Anson, a Tomtit, and in one corner of a hangar a light aircraft, possibly a Prentice. One day a man arrived in a small car and promptly flew it off the hard apron in front of the hangar. We watched this with interest and when he landed he told us he was in trouble with Air Traffic Control because the flight was not authorised. This seemed to amuse him rather than worry him. We found out later that he was Air Vice Marshal Donald Bennett CB CBE DSO, the leader of the wartime Pathfinder squadrons.

I was eventually transferred from Langley to the Drawing Office in the Apprentice Training School at Richmond Road. After a relatively short period there I was moved to Dunsfold. My time there was most happy. Now the coach transport didn't leave Richmond Road until normal start time, 8:00 or 8:30am, and didn't arrive at Dunsfold until mid morning, just in time for tea break! It left Dunsfold at about 4:00pm: a short day. I was in a group of apprentices that sat at the back of the coach and I am now ashamed to say that we were the cause of annoyance to other, more staid, passengers. I remember one particular chap, who I think was a rather senior member of staff, who regularly told us off. One day, one of our group brought his guitar along and played it on the coach. This senior chap came to the back of the coach and gave us a ticking off using words such as "What do you think this is, a Teddy Boys' outing to Brighton?" That afternoon, when we went to the coach, some of the apprentices had stuck a large banner on the side of the coach with his name on it followed by "Teddy Boys' Outing to Brighton". To his credit, the senior chap smiled at this. I must add that if I was on a coach now with such a group, I too would be very annoyed.

I was involved in the final wiring operations on the finished Hunters and of course saw the aircraft test flown then finally flown off for delivery. I seem to remember Swiss Air Force aircraft flown out by Swiss pilots directly to Switzerland and Indian Air Force aircraft flown out to Aden by RAF ferry pilots en route to India.

I remember several interesting incidents at Dunsfold, some quite dramatic. For its initial engine run the Hunter was tethered in the sound baffled ground running pen and one of the tasks for the electricians was to set the output voltage of the generators. To do this, the electrician had to crawl under the aircraft while the engine was running, wriggle past the nose wheel then finally stand upright with his torso in the bay where the generator adjustment screws were. When the adjustment was made, I think at 3000 rpm, he had to signal to the Rolls Royce engineer in the cockpit to raise the revs to 6000 and then check the generator output again. You could feel the aircraft kick forward at this point. Although I wasn't present on the occasion, I was told that one day the electrician carrying out this operation had his clothing sucked up towards the engine air intake and a pair of pliers in his pocket was ingested into the engine doing a great deal of damage. Apparently, there were some very white faces among the crew that had to report the incident.

On another occasion, a group of us apprentices was having lunch in the canteen when a Hunter on a test flight flew low over the runway with the airbrake fully extended and the undercarriage down. One of the mechanical apprentices said, "He can't do that". We went out to watch the pilot carry out a very flat successful landing with little damage to the air brake. I think the pilot was Frank Bullen.

Although I spent time at the various Hawker factories, I used the Richmond Road Social Club throughout. On Saturday evenings a group of us played snooker in the games room, then later in the evening moved into the dance area where there was a small band playing. We danced the waltz, the quickstep and the foxtrot, which enabled us to "chat up" the girls. In the periods that I worked at Richmond Road, I frequently used the Social Club at lunchtime, too.

After a very interesting time at Dunsfold I was transferred back to Richmond Road where I came to the end of my apprenticeship. I had aspirations to go into the Drawing Office but apparently it wasn't on for craft apprentices to graduate to the Hawker DO so, in 1960, I left to join Dewhurst & Partner, who designed switchgear for lifts and cranes, as a circuit draughtsman. After two years, I left there to join Page Engineering, Sunbury, who designed and made aircraft instruments. I remember being involved in the design of instruments for aircraft such as the Trident, BAC 111, VC 10 and several others including Concorde and the TSR2.

I left there, and the aircraft industry, in 1964 to join The Atomic Energy Research Establishment at Harwell as a design draughtsman. I worked my way through the ranks until I retired in 2003, in charge of my own Drawing Office.

HAPPY DAYS

Alan Abbott remembers an event when he was with Ground Test Services…

I started in the Experimental Department, moved to the Lofting Floor, and then on to the Ground Test Services Control Engineering Section where I became involved with the Gnat fin stress recorder. We were having a lot of trouble getting this to work; remember that in those days transistors came in single cans and the only counters were electro-mechanical. All the clever people had found other tasks to get involved with, leaving me to sweep up. We had our system fitted to the outside left Red Arrow and to a standard fleet trainer. The RAF took the attitude that unless the Red Arrow was involved in displays, both aircraft were available for my work. In those happy days if I wanted to drill holes in the aeroplanes I did so as I carried the Deputy Chief Inspector's stamp and just signed the Form 700. Simple as that.

On this particular day the 'fleet' aircraft was to fly from RAF Kemble, so I drove down in the morning and set up and zeroed the system. I briefed the pilot to fly from Kemble along the low level corridor through the Welsh mountains to the Irish Sea then to climb to 12,000 feet and perform a series of fin-loading aerobatics. Off he went and I retired to drink coffee and exchange lies with the Red Arrows. After 45 minutes someone came in and informed me that the aeroplane was back. I walked out to the pan and Dusty Rhodes had just shut down and opened the hood. I approached and Dusty told me "I haven't got any results". I asked what had happened - had the power dropped out? He said, "No, I was at the start of the low level corridor when I saw a traditional Gypsy painted caravan so I did a couple of circuits to give it a look. Then I noticed a horse hobbled nearby so I went round and looked at the horse, then I saw a big black cooking pot on a tripod over a fire so I went round and looked at that. Then the fuel low-level warning light came on, so I came back." I couldn't punch him as he was a lot smaller than me, so I was back the next day to do it all again. A few years later I heard of a Hunter pilot suffering engine failure 100 miles out over the North Sea and gliding home to his airfield. His name? Dusty Rhodes. Obviously a lack of distractions bought out the best in him.

After leaving Hawker I joined my wife in Tupperware which took us to Merseyside then the New Forest. Following this I went into printed circuit board (PCB) design, ending up at Boscombe Down. During this time my elder son moved to southern Spain and on a visit there we took a trip to Gibraltar which ended in my buying a 37 ft sailing boat. The family sailed this to the Caribbean and slummed it around the islands for a while. At the turn of the century we came back to Spain and moored up in Marbella where I still live on the boat. I finally learned to fly at the age of 74, where I became quite proficient at bending ultralights. Learning to fly with all the instrumentation in metric was a challenge. A fellow learner really pranged the ultralight the day before my general flying test, so I was tested on a borrowed fully airways equipped Tecnam. Still don't know how I passed.

MEMORIES OF A HAWKER APPRENTICE

Doug Shorey remembers his life with Hawker….

Part 1 - LIFE BEFORE HAWKER

I was born in South West London in October 1940 and lived there until my early 20's. As I entered my teen years I developed a keen interest in military aircraft. It started with making balsa wood models and progressed to assembling Airfix kits of mostly WW2 aeroplanes. My interest was also stimulated by reading many books on the subject. It was about this time that I decided that working in the aircraft industry was something I would like to do after leaving school. I knew that by the time I reached the age of 15, in mid 1956, I would be interviewed by someone from the Youth Employment Service with a view to assisting me in finding suitable employment the following year.

Eventually the day duly arrived for my interview and I was greeted by an unsmiling elderly woman of rather corpulent proportions. She was a fearsome looking character, dressed in a thick brown tweed suit with her greying hair pulled tightly back into a bun. Indeed the lady did not inspire me with much confidence as I sat down before her. I told her of my boyhood interest and that I hoped to pursue a career in the aircraft industry. Without batting an eyelid the woman responded by telling me: (1) "There are no aircraft companies round here" and (2) "It was highly unlikely they would employ the likes of me anyway." She went on to say all I could expect was employment in a more general engineering environment. I left the interview feeling devastated and demoralised. On arriving home, I told my Mother what had happened and she suggested I write to as many aircraft companies as possible. And that was precisely what I did, contacting amongst others de Havilland, Gloster , Folland, English Electric, Vickers and of course Hawker. I received positive responses from all of them and this led me to making formal application for employment about a year later. I was successful in gaining interviews with every company I approached and I subsequently received letters offering me an apprenticeship from all but Vickers at Weybridge. Clearly Hawker was my preferred choice because Kingston was only about 8 or 9 miles from my home. More importantly their core business was fighter airframe structures, which was where my main interest rested. I had no hesitation in accepting the offer from Hawker and I duly reported for duty in late August 1957, a couple of months before my 17th birthday. However I was to encounter something of a setback before I started. I had been offered an Engineering Apprenticeship but unfortunately I failed to secure the correct number of GCE passes for this grade. I was therefore reclassified as a Trade Apprentice.

Part 2 - LIFE AS A HAWKER APPRENTICE

Before joining Hawker I had two prime ambitions. The first was to work on the design of airframe structures and the second was eventually to gain Chartered Engineer status. It was evident that it would be difficult to realise these ambitions as a Trade Apprentice but at least I had been given the opportunity to work in the aircraft industry.

My first day with the company was at Richmond Road in the Apprentice Classroom where I met the other 20 or so boys who would be with me during my first year of training. We were also introduced to our training school instructors: Rex Lawrence, Frank Gay and Bill Wooding. The Apprentice Supervisor was Len Holton and he told us how our training was to be structured over the coming years until we all collectively reached our 21st birthdays. I had previously met Len Holton at my original interview when applying for employment. I found him to be a warm and sincere individual and I felt very happy with the presentation he gave on that first day in the classroom. I was to have a lot more contact with Len in the coming years and it is largely due to his assistance and efforts that I was partly able to realise my initial ambitions.

My first year was spent in the Company training school. We were arranged into groups of three or four boys, and our week was divided into the following activities: three days were to be spent in the training school workshop, one day in the company classroom and one day on day release at Technical College. My original aim had been to study for an ONC (Ordinary National Certificate) in Mechanical Engineering on day release – a three year course – before moving onto HNC (Higher National Certificate). However as a Trade Apprentice I was obliged to study C&G (City and Guilds) in Machine Shop Engineering. The Training School was housed in a separate building from the classroom and it was divided into three areas: the machine shop run by Rex Lawrence, the fitting shop run by Bill Wooding and the installation area run by Frank Gay. This latter area comprised an old Hunter fuselage, more or less complete apart from its wings, and the work here entailed the removal and reinstallation of components and sub-assemblies.

At the end our first year in the Training School we boys were sent off to spend time in different departments within the Company. My first assignment was to the machine shop at Canbury Park Road. I was there for about six months before being transferred back to Richmond Road. During my year at the training school I approached Len Holton to ask if I could be transferred onto the ONC course at college on day release, commencing September 1958. I was told this was not possible. I therefore decided to study ONC at college on a 3 evenings per week basis, in addition to doing the City and Guilds course on day release. At the end of my second year at Hawker I was fortunate in gaining good marks on both courses. Armed with my 1st years ONC results I again approached Len Holton to see if I could switch to ONC on day release but the answer was still the same. This pattern of education was to continue for the rest of my apprenticeship and I managed to gain good ONC marks with my evening studies, as well as a City and Guilds final certificate on day release.

Len Holton knew of my ambition to work in the drawing office on airframe structures and I think he was impressed with my determination and commitment to study ONC at evening classes in my own time and expense. About 6 months before I was due to finish my apprenticeship Len called me into his office. His purpose was to acquaint me with a position for a Junior Loftsman in the Lofting Department and to ask if I might be interested in following this up. If truth be known, I did not fully understand what they did in the Lofting Department but I had no hesitation in accepting the offer of an interview. The Lofting Department was run by Tommy Wake, a most amiable and personable man and he seemed to take a liking to me. Tommy had joined the company in the early 1920s and thus had first-hand experience of the transition from biplanes to monoplanes right through to the jet age. Tommy's career spanned the period I was particularly interested in, which was from the mid 1930s onwards and I later found him to be a very knowledgeable individual to have a conversation with. He decided to take me on and I was to spend around 18 months working in Tommy's Department. I considered myself to be very lucky to secure this position and I began to gain a useful knowledge of airframe structural design and the aerodynamic contours of the fuselages, wings and tailplanes etc. (To be continued)

MEMBERSHIP NEWS

Sadly we record the death of Pete I'Anson and send our sympathy and condolences to his relatives and friends.

We welcome new Members; Gerry Jackson, John McCarthy, Mary Starke, Nick Stroud and Dominic Tait.

MEMBERSHIP LIST NOVEMBER 2013.

Names in BOLD have not paid their 2013 subscriptions. Please send £5 to Barry Pegram, 12 Becket Wood, Newdigate, Surrey, RH5 5AQ. If you are **leaving** please let him know by post or telephone 01306 631125. Thank you.

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