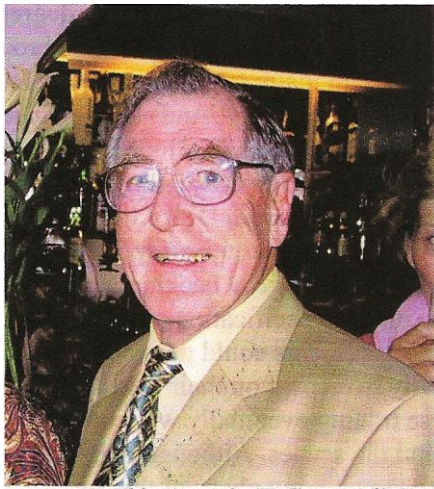


# THE 10th D.G. ENG BUGLE

*The 10<sup>th</sup> issue of our 'Rag' is celebrated with two stories from former members of the DGEng fraternity. Geoff Ainley was in post when I joined DGEng in 1969 and I am particularly pleased to have a first hand account of the hierarchy at that time. Geoff thought that his script was perhaps too long but I have failed to find reasons to edit this comprehensive yarn. (So, don't blame him!) Ken Silvey has also provided an excellent narrative of his battles in DGEng and a lot of us readily identify with many of his comments. I am confident that you will enjoy each one and hope that it will encourage even more participation at the get-together in March.*



*Some Recollections of EngRD 1968 -78 by Geoff Ainley (then DEng2)*

My transfer to St Giles Court in Jan 1968 was truly a culture shock. It followed 24 happy and absorbing years in a semi-academic environment (RAB, PJ(R&D)Ltd, NGTE) researching esoteric aspects of turbomachinery and gas turbine design; but terminated suddenly and very unexpectedly by a sabbatical year in what was then called the Imperial Defence College (idc) [shortly after renamed the Royal College of Defence Studies (rcds) reflecting I guess the wind of change finally blowing through the dustier back corridors of Whitehall!]. The College is an MOD enterprise run since 1924 on very gentlemanly lines and in 1967 comprised approx 75 British, Commonwealth and USA students drawn predominantly from the armed services at roughly Colonel/Group Captain/Naval Captain level with a smattering of admin civil servants at Principal level plus just two 'boffs'! I didn't know at the time why particularly I had been selected for the 1967 course. Bob Weir (then DINGTE) did his best to oppose and dissuade me from 'wasting' a

year! However it emerged later that it was Peter Lloyd (then DGEng) who I had to thank for the original nomination; and in return for what I still look back upon as the most interesting and varied year of my life I learnt that I was expected to fill the then newly created post of DEng3 in the DGEng empire. Since this for me was a significant promotion I won't pretend I had to be dragged screaming from 'academia'!

I was of course plunged 'from cold' into the life you're all too familiar with; which drew only marginally upon my technical background but which entailed a constant hurly-burly of administrative exchanges with wide varieties of people in unfamiliar project offices, contracts branches, administrative branches - plus of course the many industrial companies working on contracts EngRD were overseeing (and not forgetting the associated mystique of the RTO organisation!). All novel stuff for me, very green behind the ears in this totally new environment! Indoctrination into the cult of the 'AD Authorisation System' - so vital to the control of the many cost-plus contracts which still predominated during my ten years in St Giles - occupied much of my early months; coupled with getting to know the managers of many of the firms involved. Technical Costs Division had still to be invented when I started but slowly evolved during the years to come - as did the much, and often hotly, debated subject of incentive and fixed price contracting.

Eric Carter and Dennis Mallinson were then my friendly eo-Directors and it was immediately clear that Peter Lloyd throughout his time as DGEng not only ran a happy ship in St Giles Court but was greatly respected by the captains of all the leading industries with which we were involved - the three Divisions of Rolls Royce in particular. I admired his velvet gloved 'unbullying' manner when often having to take RR to task on various matters at his six monthly high level 'DGEng Meetings' with the Company - but the message was invariably taken with serious courtesy and produced results. In return Peter was not averse to promoting diplomatically within the MOD hierarchy, often successfully, some of the new RR concepts such as 'demonstrator engine projects' which we then believed had special merit but no ready funding available. I was sad when his time for retirement came not long after my start in St Giles --- to be replaced by Eric Carter with a rather different style of management and

beginning with a major switch around of the AD Sections and their responsibilities within the three Directorates. I became DEng 2 with oversight of all major military engine projects (except Pegasus) and Jim Forshaw was promoted to DEng3 overseeing Pegasus and a multitude of engine accessory contracts. DEng 1 (Dennis Mallinson) continued to have oversight of civil engine projects - Olympus for Concord and RB211 [after the RR collapse] - plus oversight of the engine selection processes for new military projects in the 'project definition' stage.

I very soon experienced a first small baptism of fire in the shape of the development of the McDonnell Douglas Phantom FG 1 and FGR2 for the RN and the RAF for which RR had offered a reheated military jet derived from their Spey by-pass civil engine -- claimed to give the aircraft longer range and increased thrust over the US engine it replaced. All good stuff and a sop to those who objected to off-shore purchases of major equipments for the UK Services. However to clinch what had been a touch and go deal RR had somewhat recklessly offered to undertake the development plus supply and support of flight test engines at an all-in fixed price! I believe this was a first venture for RR into fixed price contracting for a military engine. The project was into its final year (theoretically) when I first became involved and almost immediately I was invited (with Norman Bever who was the nominated EngRD Project Officer) to urgent discussion with the RR project officers (Ken Davies and Cyril Elliot). Two floors up from EngRD lay the Phantom Project Office directed by A/Cdr 'Dougie' Bower who I soon learnt had earned an unpopular reputation for personally harrying and bullying all and sundry when anything untoward was spoiling his progress charts! RR were no exception when 11th h~ur problems and delays had arisen in the supply of flight engines - a familiar situation in almost every project I was to learn during later years! Norman Bever was receiving flak from both sides and was understandably irritated by the Project Director's actions in going over his head from time to time and blasting off directly at RR. Could I try and sort this out? In the event it proved easier than expected simply because at our first meeting it transpired that Dougie Bower was a fellow alumni of the Imperial Defence College - just one year before me - and we struck up an instant rapport on that account! From then on Dougie was most meticulous in ensuring that EngRD were his prime agent in any further dealings with RR - which did not of course immediately solve the real problems and left me for a period having to accompany Dougie in his personal progress reports to the Rear Admiral who was then Deputy Controller (B)

(a delightfully laid back character who introduced me to Famous Grouse whisky - after a late evening meeting I hasten to add - and had a penchant for oysters later blamed for a severe attack of jaundice which laid him low for a spell!).

Admiral Rickover, the overall Project Director for the development of the first US nuclear submarine said in the closing passage of a lecture that the greatest thing he had learnt from his experience was that 'projects are people'! How true! Looking back over my 10 years in St Giles more-than 30 years ago it is the long list of people (some real characters among them) which I best remember; and confess that I cannot now recall many of the underlying technical problems that so troubled our projects day by day. The major projects which then came into my fold included Adour/Jaguar, RB199/Tornado and BS360(Gem)/WG40(Lynx) helicopter. All were in greater or lesser degree international co-operative projects which brought acquaintance with many opposite numbers in France, Germany and Italy. An(J'some:tlIemor~bl~ meetings in the USA with McDonnell Douglas id company of Dougie Bower haggling over who was responsible (RR or McD) for the failure of the aircraft to meet its promised specification. Naturally RR with EngRD backing firmly insisted the engine met its specification, at least so far as test bed measurements could demonstrate. But RR were heavily overspent on their fixed price and some horse trading eventually went on at high level behind the scenes. Although personally drawn into the opening phase of this I'wss never told the final outcome. Which reminds me of an early incident in my HQ education. I was unexpectedly summoned to the office of a 6'ettalh Principle Under Secretary in MOD Main Building - what about I wondered? It transpired that the PUS had been given sight of a minute I had written in which I had made reference to RR Phantom Spey problems and their impact on the project cost to RR and suggesting that the problems in part were not entirely of RR making and perhaps some adjustment might be reasonable. In the nicest possible way the PUS accepted that I was entitled to a view on this matter but that a formal minute put on file at this juncture might seriously jeopardise the Ministry's freedom to negotiate if and when such a need arose etc. The upshot was that I was 'invited' to 'formally withdraw the minute from file'! It was a cautionary experience and a lesson on how sensitive could be certain documents carefully placed, dated and formally numbered in HQ files!! An unaccustomed procedure to one brought up in the rural backwaters of Pyestock!! Am I alone in this experience? - not for the first time in my life might it have been better to bite my own tongue!

I was especially well blessed with a succession of highly competent and supportive AD appointments within the Eng2 directorate during my spell in office. Ian Johnston, Jim Barnes, George Munns, Doug Mackenzie, Ken Kenworthy - and congratulations to Ian Johnston and Jim Barnes who deservedly went on to very much higher postings (from slave to master!). Sticking to the theme of people it was especially interesting to experience working closely with many of our European neighbours. My personal perception was that perhaps we shared the closest rapport with our German opposite numbers despite their unpredictability from time to time; the Italians clearly had the most 'cultured' and 'laid back' approach to co-operative ventures and were definitely the most hospitable (a RR rep once described their regular RB 199 meetings with their Fiat partners in Italy as 'ordeal by eating!'); the French were always the most difficult to deal with in collaborative meetings - so much so that I was frequently left with a clear comprehension why throughout past history the English and French have so often been at loggerheads! - although outside the meetings they were always most convivial.

At an early stage in the MRCA (Tornado) development the German delegation proposed the formation of an 'Engine Monitoring Group' comprising government officials from each of the three nations to be placed in London within the EngRD division. This 'EMG' proved highly successful in smoothing out internationally the impacts of the technical crises which inevitably arose from time to time during the engine development programme, not least the long drawn out reliability problems with HP turbine blades and the consequent problems with supply and support of development flight engines. George Munns and Jim Bluett did a truly masterful job in calming the concerns of our German and Italian colleagues whenever some untoward event occurred which carried the danger of panic reports being fired off to the heads of delegations on the overall Board of Directors! As Head of EMG it fell to my lot to report in person to regular meetings of the Board of Directors. Not always a welcome job when the programme was going through a particularly bad phase. I especially recall one occasion when HP turbine blades were failing in flight engines uncomfortably frequently, and in an attempt to conclude my somewhat gloomy report on a more optimistic note I highlighted the excellent performance and reliability being achieved with all the other major components of the engine. This brought an immediate response from the head of the German delegation: "Mr Ainley, it affords me little comfort if my doctor assures me that all parts of my body are fine except that my heart may fail at

any moment!" (He was all smiles of course at the laughter this created all round!). I'm not sure that TurboUnion (the joint RR, MTU and Fiat company responsible for RB199 development) ever fully appreciated the protective cushion the EMG provided between them and the international MRCA Management organisation. I guess TU regarded the EMG and their associated Resident Technical Officers as an administrative nuisance which had to be tolerated gracefully whilst nonetheless a bit of a pain in the neck! Speaking honestly I must admit that as Head EMG I strove quietly to minimise the bureaucracy imposed upon TurboUnion by NAMMA and our masters and to assuage the sometimes virulent and often misinformed criticisms of TU that arose in NAMMA from time to time. On the whole I believe we did a pretty good job. However in one of my ritual ACR interviews with the then DCA of the time I was told I was 'Too kind to RR!' -- Oh well you can't please everybody, but my own conscience remains perfectly clear.

I suspect that the person occupying the DGenG chair was often a rather remote figure to the main body of EngRD staff below AD level. Is this correct? During my 10 years I experienced four successive DGs - Peter Lloyd, Eric Carter, Dennis Mallinson and Ivor Davidson. Each had their individual approach, albeit in some instances pronouncedly idiosyncratic! Of these Eric Carter must have been the most widely known having spent such a long period of his career working his way up through the division. Eric, I recall, felt it incumbent upon himself as DG to issue periodically rather lengthy 'state of the engine industry' epistles which he circulated around the upper echelons of MOD. I wish I had kept some of these. His literary style was certainly unique to himself and his endeavour to cram a huge amount of information and comment into a minimum of words often bemused his readers. 'Pure Cantonese' a certain PUS is reputed to have rather rudely commented! But each DG in their own way adopted a predominantly 'hands off' approach to the day-by-day administration of the Division overall, leaving this primarily in the hands of the Ds and even more so the ADs. In my experience the ADs always formed the sturdy backbone of the Division and provided the main day-by-day driving force to what I sincerely believe was in its time a major asset to MOD procurement. For my own part I found my 10 years to be absorbing, varied and enjoyable (apart from the dreaded commuting), but by then I was gagging for a change of scenery and a different challenge - which eventually 'grounded' me for the remainder of my Ministry career into the rather different world of armoured fighting vehicles! But that's another story ..



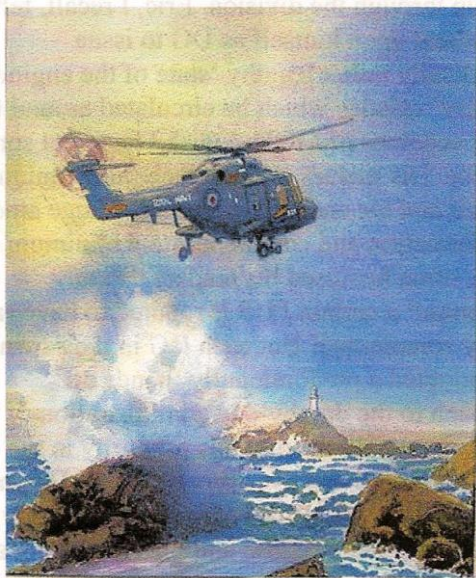
28 years later, when I look around my domestic glory hole and its untidy mess of ill-filed and loose heaps of paper, what I really miss is a dedicated personal secretary. Kathy or Rose-please come back! !

Many of you possibly know that in retirement my absorbing preoccupation is largely sketching and painting, although only during the past few years have I developed a taste for sketching with the Guild of Aviation Artists. Only a few weeks ago I visited the Tangmere Aircraft Museum and found myself looking at a long retired Phantom. Nostalgia overcame me and I append a scan of my day's labour! Also included is an impression of a Navy 'Lynx' (another project which took up much of my time intermittently!).

Geoff Ainley



Phantom at Tangmere Aircraft Museum  
Navy Lynx pictured over the Corbiere lighthouse.



*I would just like to continue Geoff's story for a couple of lines or so because he also has another side to his character which will be of interest to many of you.*

*He is an original 'Bigglesmaniac' and for those who are familiar with the daring tales written by Capt. WE Johns will know the probable affect that his stories have on a young generation. Geoff has completed my education on 'William Earl Johns' with two articles which were recently published by him in the 'Biggles Friend Magazine' and a further one in the 'Guild of Aviation Artists'. These 2005/06 contributions highlight the influence of Johns, not only with his stories but his accomplishments as a skilful illustrator of all things aeronautical in books, comics and magazines. I am fortunate enough to have a copy of Geoff's other paintings and I thought it appropriate to include a couple more from his collection which show off the 'Biggles Effect'. I hope this meets with your approval.*



Bigglesmania



SE5A's Skylarking

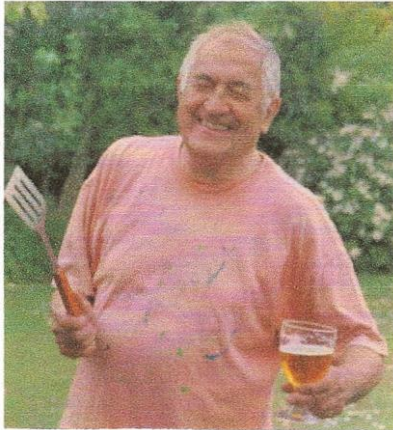


Sopwith Baby by Bamburgh Castle





*My second write up, from Ken Silvey, needs little introduction from me. Ken is a character well known to lots of you and his story is one that we all identify with. A practical approach by a very practical man!*



*Ken Silvey's idea of gardening! !*

My first adventure into the employment world was as a 13 year old on the pumps at AC Andersons Garage in Longlevens, just north of Gloucester. There I learned the basics of the Mechanics language and to smoke without setting everything alight. Petrol was 4/- (20p) for Power (low grade) and 4/6 (22~p) for Shell/National Benzole per gallon; a pint of Energol (oil) was 1/6 (7~p). Conditions of employment were simple and exploitive; two hours in the evening after school and all day Saturday and Sunday for 10/- (SOp) per week. In school holidays there was a simple incentive scheme, eight hours per week day, all day Saturday and Sunday for 10/- per week with no time off.

This was the place where I learned to make mistakes, like putting 20 gallons of petrol into a Wincanton AEC tanker and three gallons of Derv into a 1938 Morris Ten - he didn't go far!. I learnt about basic electrics from the spark plug tester - gives you one hell of a belt when it's connected to the car you are repairing and some Berk presses the button. I found that a PowerPak two stroke attached to a bike can be extremely dangerous when the throttle sticks open. Some customers of course got upset when they saw a 13 year old lad driving their car.

I got a proper job in 1957 when I joined Rotol at Staverton as a machine shop apprentice. Here I learnt to make bigger and more costly mistakes, drink beer and smoke more cigarettes. The language of the shop floor was similar to that of Anderson's Garage, but I did enjoy machining. Dowty took over Rotol in 1959 and I finished my

time as a Jig-Borer in the Dowty Fuel Systems Experimental Machine Shop where I put to good use my skill at making mistakes. Like the 1" and 3/16<sup>th</sup> 'a' fit (honeymoon fit in s/fparlance) tooling hole W' out of position in a Pegasus fuel system billet. One of the last projects I worked on was the cast stainless steel body for the RB 199 Reheat Unit. But it was interesting work. In those days at Downtys the Operator made his own jigs, fixtures and cutting tools; calculated positional co-ordinates then turned billets of hiduminium into complete fuel system casings.

For several reasons I decided to get out of Industry. It was 1971, Rolls-Royce was in trouble, and there was widespread industrial unrest so I joined MOD(N) as a planner/estimator at The Royal Naval Armament Depot Gosport. Oh, and I learnt how to stop smoking.

The work included everything from Tin Hats to Torpedoes. I covered work in the Vehicle maintenance department, Machine shop, joiners shop, Torpedo and Small Arms Sections. And some odd jobbing, one of which was assessing the work content for a Chippie and his mate shoring a ship's cargo of naval stores. This particular cargo of Naval 'Stores' was being transferred to another depot. It had two categories; 'Stable' and 'Unstable'. So Silvey and his Chippies were in the ship's hold while the stores were loaded- various shapes and sizes, some bigguns too! To me there didn't seem to be any sort of respect for these 'Stores'. Nothing gentle about the handling technique, just drop the things, walk all over them and to my mind wilfully mistreat them. This was compounded by the Chippies securing everything with planks of wood and 6" nails. I was wondering where in the ship would be the safest place if one of these 'Stores' did what it was designed to do. In summary, the Chippies got what they wanted and I was pleased not to need urgent attention in the laundry.

1976 saw a transfer back to the Aero Industry with AQD at Rolls-Royce Bristol where I got to know the site fairly well, particularly the Swarf Shed where all sorts of goodies could be obtained at reasonable prices. 1983 and another transfer, this time to the Resident Engine Office (REO) covering RB199 defect investigation, repair and production business. And I still had access to the SwarfShed!

Like all Civil Servants in the provinces I had ambitions to go to London, St Giles that is. I got my wish in 1989 with the Adour Project Offi~e covering Repair & Overhaul work and operational enhancement programmes. I expected to be in London for 3 ~ years - another mistake, it was nearly 6 ~ years before transfer to Abbey Wood!

Yet another mistake, commuting to London care of British Rail, I saw a dirty siding near Westbourne Park transformed into a modern repair depot for Eurostar. Progress on the Channel Tunnel was going well and the share price steadily rising. Where to invest some of the proceeds of my London Weighting? Eurotunnel of course at £3 a go - now an unhealthy 15p. However shareholders do get good discount rates and also have the facility to turn up and go - subject to availability. We have never needed to wait more than an hour.

After a short period in the Pegasus Project office I joined the EF A EJ200 Project Office covering the engine certification programme. EJ200 was very interesting, between 1993 and 1999 I didn't miss an Oktoberfest and we have been a couple of times since.

Towards the Millennium and my retirement year the grapevine was loaded with rumour of redundancies -euphemism for early retirement packages. Thinking about life after MOD I went to a Machine Tool auction and bought a very nice precision Borer. Did my market research by way of a Hampshire Air Show, all contacts say that they could use the type of facility I intended to set up and so I pestered MOD for an early release. In the meantime I rented a Unit in a council run eh'teq,rise centre, installed the machine and Beachley Precision opened for business on 2<sup>nd</sup> January 2000.

So, contact my contacts in the aero business and guess what? - Not a thing from them! Fortunately I had enough work from local sources to see me through January. Anybody into routing may have come across a 2d copying device that I designed and prototyped. A nice little earner! February was slack, this was my time for checking the library business directories and cold calling possibles. I think that was the hardest work of my life.

Business picked up in March and had a steady turnover from thereon. Ironically, I was doing sub-sub contract work for some of those well known comp~ffJ,~ that didn't want to know at start-up. In the big game of snakes and ladders I was up a couple of rungs when along came a nasty snake. I had done a comprehensive risk assessment that the MOD would have been proud of, this included the Unit in the council owned enterprise centre for which they said that they had no plans in their 5/10 year projection.

In May 2000 however the council announced that they had a buyer for the centre - Unit occupants would be offered an assistance package to vacate, good init! To cut a long story short, I kept the

business going until August of 2001 to coincide with Pat's early retirement.

Retirement is great, between visiting our kids and their families, I'm extending my garage to enable installation of my jig-borer and then catch up on some model engineering.

With best regards to all.

**Ken Silvey**

*As always, a very big thank you, from all of us to both our Contributors on this special occasion and an apology to Ken for not getting his article in the previous BUGL~. My appreciation for your patience Ken.*

*I hope that you have all had a very successful year and that the next one will be even better. My only problem is that Golf, Bowls (Indoor & Out) Playing Bridge (but you cannot get the Partners can you!) and more holidays provides an ever increasing treadmill, it's all goodfun really as long as you don't weaken!! Oh!, by the way, although he has asked that I keep it quiet, our illustrious leader young Ted m 'lad will be 70 in May 2007. He asks that no fuss is made but says that anyone visiting his area during this month will be extremely welcome to buy him a pint or two for old times sake. Generous to a fault as usual!! Get some time in Ted!*

**THE DGEEng BUGLE No 10**

**JANUARY 2007**