

# RAF COLLEGE CRANWELL

## “College 100 Memories”



A Summary of College Items - Chapter 2  
College People from 1920 - 2020

# Prologue

If ever you are required to research something on the heritage of the RAF College - it could be looking up details of a relative who might have been trained at the College, or it could be a more complex review of specific trends throughout its 100 year history - inevitably you will be encouraged to explore the Library's holding of College Journals.

In addition to many other records held within the College and other, third party archives, these journals contain a wealth of information on the milestones, the events and the thinking that underpinned College operations. They are essential reading for anyone who wishes to gain an understanding of how the College evolved and took on the challenges that confronted the world's oldest air training academy throughout its marvellous history.

As its contribution to "College 100" - the celebration of 100 years of officer training at the RAF College - the Cranwellian Association has created a suite of albums that capture RAF Cranwell's heritage. Not least are the albums, one for each year of the College's existence, that reproduce extracts from the College Journals.

This particular album is one of six chapters that portray 100 topics - 'memories' per se - each drawing on Journal extracts in an attempt to summarise life at the College throughout its history, from a variety of perspectives. They are extracts of original articles in the Journals and so their accuracy is dependent on the authors of the day; the dates in each slide title indicate each article's date of origin.

We hope "College 100 Memories" gives you an enjoyable insight into life at the College between 1920 and 2010. Happy reading.

# Memories that Symbolise College People in 100 Years

To start any specific article:

1. Note the slide number shown in red on this page; then
2. Scroll to the slide number shown in the article, e.g.

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5. Pioneer Graduates (1924)
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# Autumn 1922 - Our First Loss



THE LATE F./CADET V. O. GILLMORE.

WE have to record with deep regret the death, in an aeroplane collision, of F./Cadet Vyvyan Osborne Gillmore, aged 19, the eldest son of the Reverend David Gillmore, late of Highworth, Wilts, and of Allis Gillmore.

He was educated at St. Bee's, Cumberland, and entered Cranwell in January, 1921, having already won, in November, the first Wakefield Scholarship. He was 1,000 marks ahead of the next Flight-Cadet and the Air Ministry awarded him a Prize Cadetship. At the end of his first year he was still first of his term, and gave every promise of being a brilliant and valuable officer. Besides great scientific and mathematical ability, he had a love of history and a genius for self-expression. He was in the cricket teams of 1921 and 1922. He often played for the XV in 1921, and would certainly have been in the side this year. His gentleness and modesty made him very many friends. We assure his parents of the very sincere sympathy of all at Cranwell.

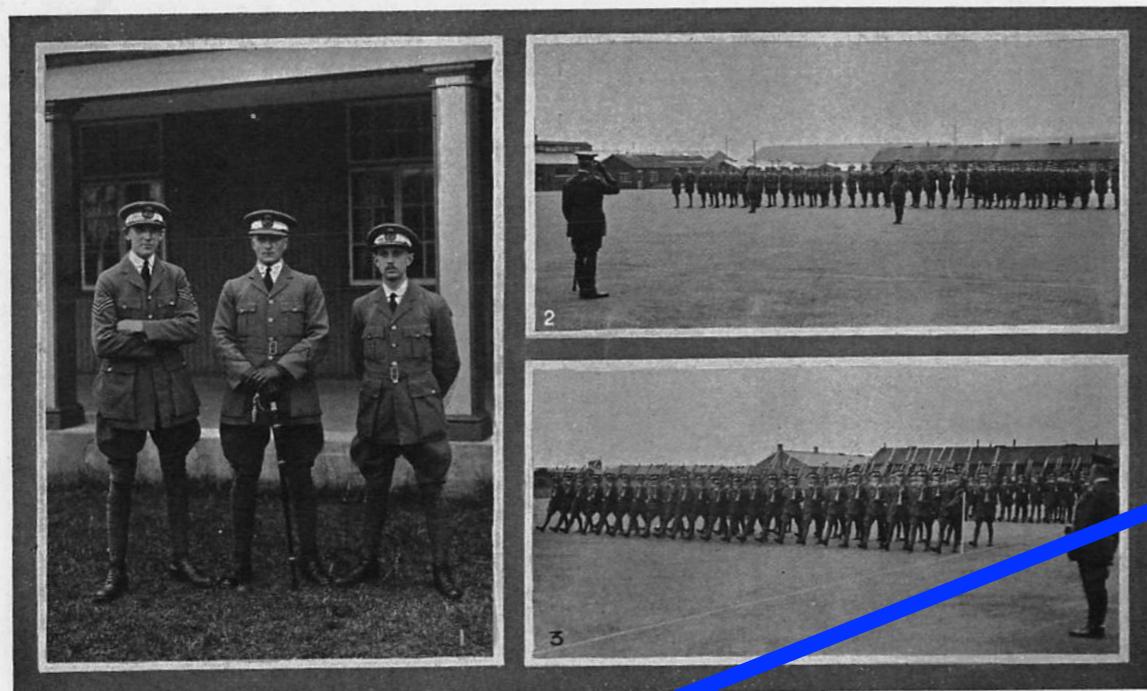


F21 Entry



Laid to Rest  
St Peter's Church  
Cranwell Village

# Autumn 1924 - Pioneer Graduates



**THE PRIZE-WINNERS—JULY, 1924.**

F./Cadet Sgt. R. L. R. Atcherley.  
F./Cadet U./O. H. R. D. Waghorn.  
F./Cadet A. W. Elias.

**THE INSPECTION—JULY, 1924.**

2.—Advance in Review Order, Sir William Robertson taking the Salute.  
3.—The March Past.

[Photos, Gale & Polden, Ltd.]



Atcherley was educated at Oundle School and entered the RAF College in 1922. He was on A Squadron and finished as a Flight Cadet Sergeant. He graduated in 1924 and was awarded the RM Groves Prize.

[His twin brother David Francis William Atcherley also applied to enter Cranwell, but was rejected on medical grounds. Instead, he entered the RMA Sandhurst and was commissioned into the East Lancashire Regiment. Subsequently, David transferred to the RAF in October 1929].

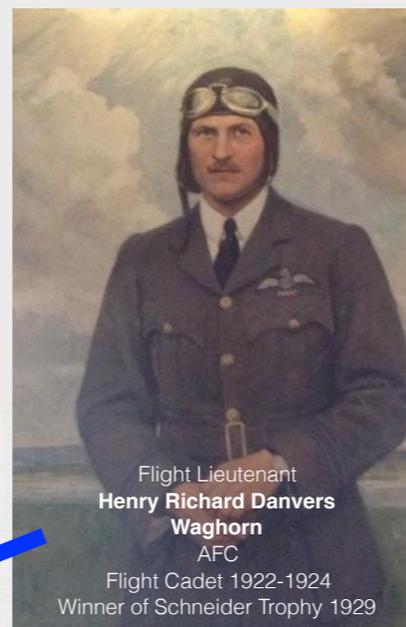
On graduating from Cranwell, Richard had a distinguished career as a fighter pilot, flying instructor and test pilot. He was a member of the RAF's Schneider Trophy team in 1929.

In May 1940, he was Officer Commanding Air Element of the British Expeditionary Force in Norway, before assuming command of RAF Drem the following month. At Drem, he helped to develop the night landing system which subsequently became known as the Drem system.

He was appointed Commandant of the RAF College in September 1945 in the rank of Air Commodore, the first Cranwellian to hold the post.

He subsequently became Chief of the Air Staff for the Royal Pakistani Air Force in 1949 and then Air Officer Commanding No. 12 Group in 1951. He went on to be Head of the RAF Staff in Washington D. C. in 1953 and Air Officer Commanding-in-Chief at Flying Training Command in 1955, before retiring in 1959.

Born 12 January 1904. Died 18 April 1970.



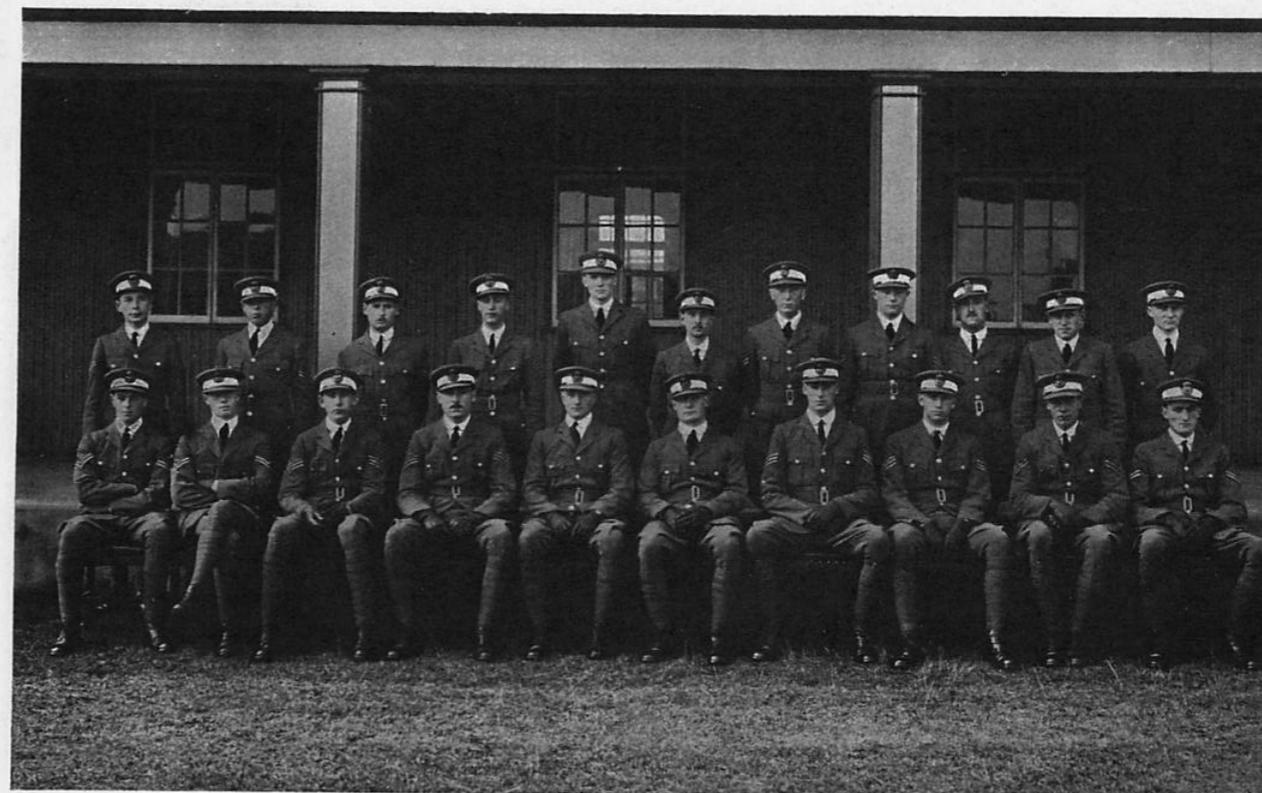
Flight Lieutenant  
**Henry Richard Danvers  
Waghorn**  
AFC  
Flight Cadet 1922-1924  
Winner of Schneider Trophy 1929

Participation was restricted to three aircraft per nation.

British representatives, managed by A.H.Orlebar, were two Supermarine S.6s flown by Waghorn and Atcherley, and D'Arcy Creig's Supermarine S.5. Stainforth was in reserve with two Gloster Napier 6.

Italy presented two Macchi M-67s flown by Lts Remo Cadrigher and Giovanni Monti, and one Macchi M-52 flown by Tomasso Dal Molin.

The winner was Flt Lt Henry Waghorn, completing the 350 km race in 39 minutes 42 seconds, with an average speed of 528.867 km/h.



**SENIOR TERM, PASSED OUT—JULY, 1924.**

[Photo, Gale & Polden, Ltd.]

Standing.—F./Cadet Cpl. McC. Reynolds, F./Cadet Cpl. J. A. T. Ryde, F./Cadet Cpl. G. H. Loughan, F./Cadet Cpl. L. R. W. Tillard, F./Cadet R. H. Barlow, F./Cadet A. W. Elias, F./Cadet Cpl. A. B. Kay, F./Cadet Cpl. H. A. Brookes, F./Cadet J. C. Don, F./Cadet H. H. Aspinall, F./Cadet F. W. Matthews.  
Sitting.—F./Cadet Cpl. J. Warburton, F./Cadet Cpl. F. M. Denny, F./Cadet Sgt. R. L. R. Atcherley, F./Cadet Sgt. J. E. W. Bowles, F./Cadet U./O. H. R. D. Waghorn, F./Cadet U./O. W. O. du Port, F./Cadet Sgt. D. A. Boyle, F./Cadet Sgt. C. N. Stanley Turner, F./Cadet Cpl. C. S. Woode, F./Cadet Cpl. J. T. Eve.  
Absent.—F./Cadet Henry.

# Spring 1925 - College Personalities (1)



[Photo, Gale & Polden, Ltd., Aldershot.]

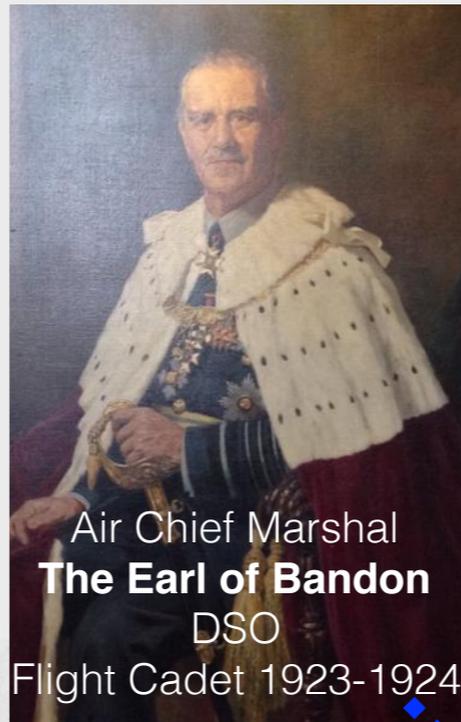
**THE PRIZE WINNERS—DECEMBER, 1924.**

- F./C. Sergt. A. H. W. J. Cocks (The Abdy Gerrard Fellowes Memorial Prize).
- F./C. Under-Officer G. R. Beamish (The Sword of Honour).
- F./C. Corpl. S. H. V. Harris (The R. M. Groves Memorial Prize).

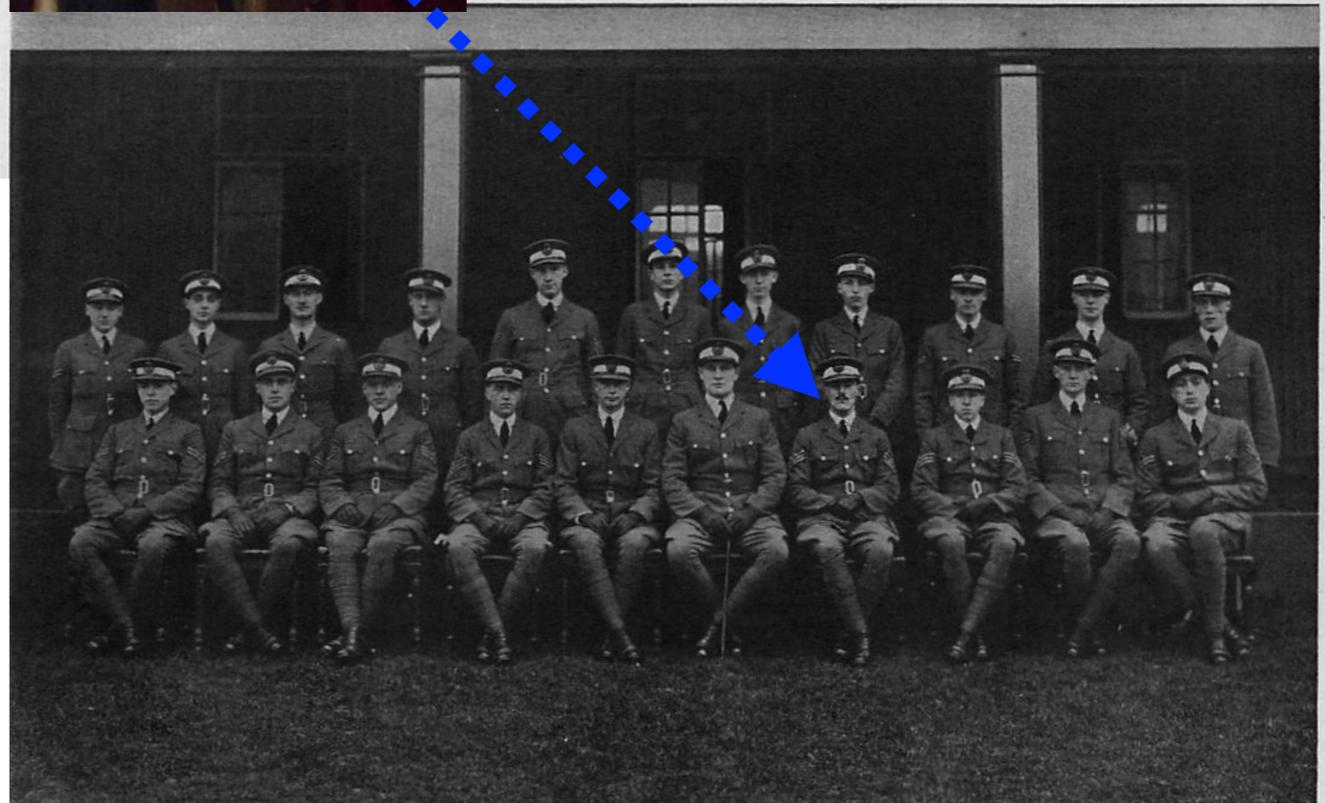


[Photo, by courtesy of "Flight."]

**"HONEYMOON" EXPRESS.**



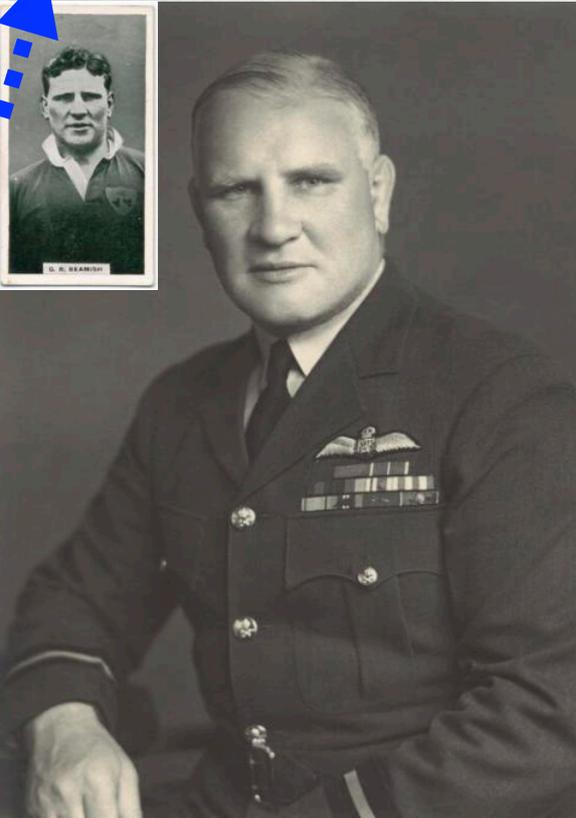
Air Chief Marshal  
**The Earl of Bandon**  
DSO  
Flight Cadet 1923-1924



[Photo, Gale & Polden, Ltd., Aldershot.]

**THE PASSING-OUT TERM—DECEMBER, 1924.**

- Standing.—Harris, Cox, Selwyn, Hayes, Hardy, Walker, Hayes, Terry, Ford, Willetts, O'Hanlon.
- Sitting.—Campbell, Addams, Nowell, Beardsworth, Scott, Beamish, Lord Bandon, Cocks, Allinson, Montgomery.
- Absent.—Franks.



**Air Commodore George Robert Beamish** (later Air Marshal Sir George Beamish) was Commandant from 1<sup>st</sup> January 1949 until 31<sup>st</sup> July 1950.

He had entered the College as a Flight Cadet in 1923 and was commissioned in 1924. He flew with 100 Squadron and 45 Squadron and during the Second world War, he served overseas in the Middle East, Crete and North Africa.

He played rugby for Ireland and the British Lions.

George was one of four brothers who served in the RAF. Cecil Beamish was a dentist who rose to the rank of Air Vice Marshal. Victor Beamish was also a Cranwell Flight Cadet between September 1921 and August 1923; a rugby triallist for Ireland, he was killed in action on 28<sup>th</sup> March 1942 in the rank of Group Captain (DSO\*, DFC & AFC, Battle of Britain). Third brother, Charles, also played for Ireland and the British Lions and retired as a Group Captain.

George Beamish's last appointments were as Air Officer Commanding-in-Chief at Transport Command in 1954 and Air Officer Commanding-in-Chief at Technical Training Command in 1955. In 1955, Beamish was appointed a Knight Commander of the Order of the Bath.

Born 29 April 1905. Retired in 1958. Died 13 November 1967

# Spring 1925 - College Personalities (2)



H.R.H. PRINCESS MARY AT CRANWELL.

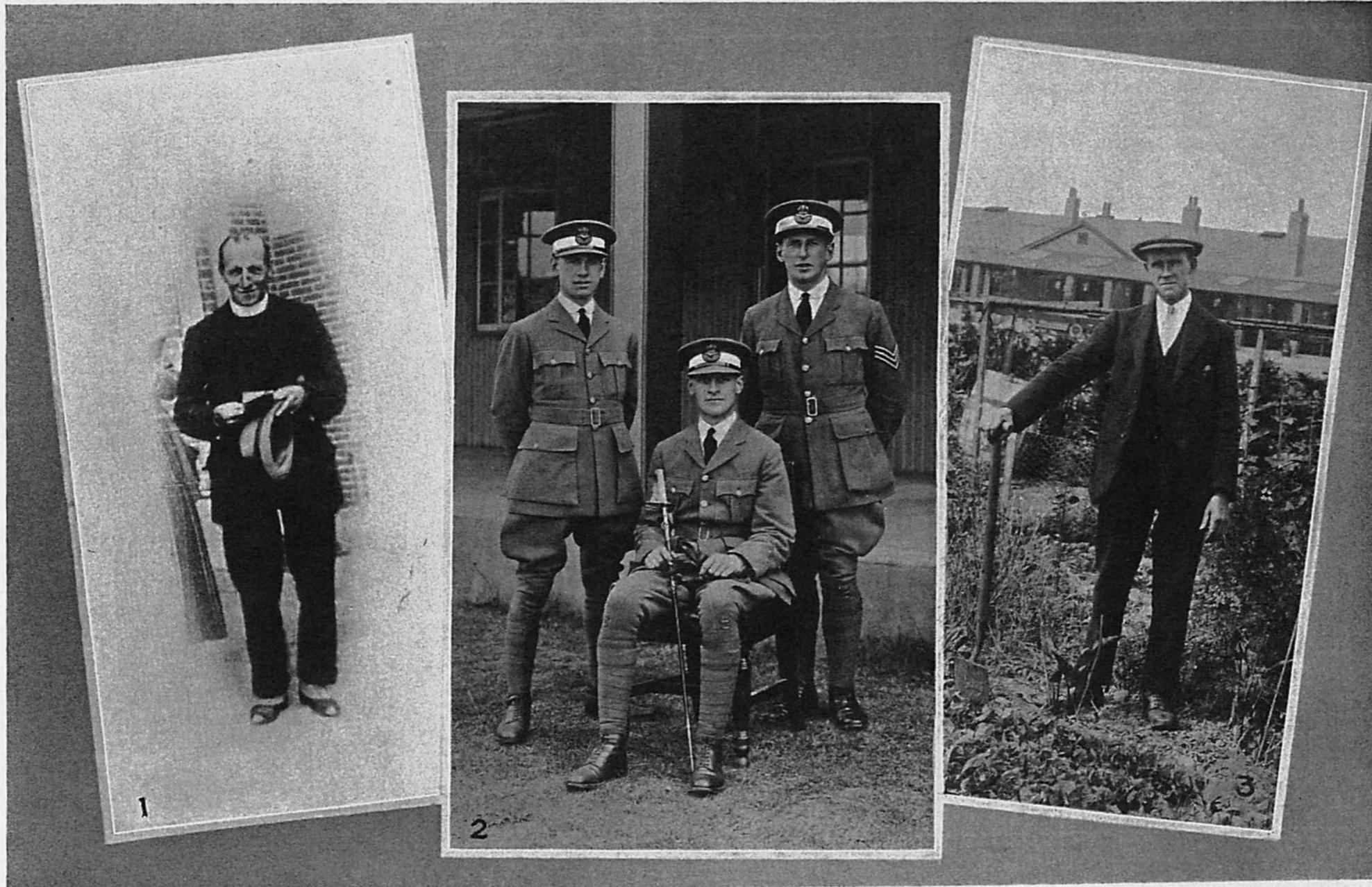
## PRINCESS MARY AT CRANWELL.

PRINCESS MARY VISCOUNTESS LASCELLES, who was attended by Miss Kenyon-Slaney, visited the Royal Air Force Hospital and the Royal Air Force Cadet College, Cranwell, on Friday, April 24th, 1925.

Princess Mary, who arrived shortly before noon, was received at the Hospital by Air Commodore A. E. Borton, Air Officer Commanding the Cranwell Station, Miss J. M. Cruickshank, Matron-in-Chief of Princess Mary's Royal Air Force Nursing Service, and Air Commodore D. Munro, Director of the R.A.F. Medical Services. A guard of honour of 100 boys and non-commissioned officers from the Boys' Wing was mounted under the command of F./Lieut. Brown, and was inspected by the Princess. Her Royal Highness was then asked to accept a bouquet; and several officers and ladies of the station were presented.

Princess Mary inspected the Hospital, going through the wards and kitchens, where she spoke to the patients and to those in charge of each section. She next visited the Cadets' mess and quarters. At the Sisters' mess Her Royal Highness was entertained at lunch by the Matron-in-Chief and the Matron. The Cadet College Band played during lunch. The Princess shortly afterwards left for Grantham, to join the train for London.

# Spring 1925 - College Personalities (3)



THE LATE REV W. B. KEYMER.

PRIZE WINNERS, JULY, 1925.  
R. Costa. T. N. McEvoy. J. G. D. Armour.

MR. F. G. BELL,  
Head Gardener at Cranwell since July, 1916.

# May 2012 - CWO's Perspective (4)

## Royal Air Force College Cranwell: The College Warrant Officer's Perspective

Warrant Officer C Mears, College Warrant Officer (CWO)

As the College Warrant Officer (CWO), I feel privileged to be able to use this forum to address as many people as possible in an effort to increase the corporate image of the Royal Air Force College Cranwell, both from an airman's perspective and from that of the CWO. An officer once told me to always take an opportunity when it arrives as you never know when the chance may be offered again. I have tried to remember that piece of advice but it is only later in life that I realise how good that advice was. I often reflect on missed opportunities throughout my career. There have been many reasons why I was unable to capitalise on advice given by others; but in my early years fewer opportunities were available because I wasn't in the correct place or did not have the correct rank. It can be argued of course that if I had really wanted to find the opportunities they would have presented themselves.

As acting CWO, I believe I am in a privileged position; not only for becoming a Warrant Officer (WO), even though it is for a short period of time, but also to be at the College where I have the opportunity to shape tomorrow's officers. It is an opinion shared by all the staff here at the Officer and Aircrew Cadet Training Unit (OACTU), that the cadets must understand the important role they are about to undertake. As an airman, I have always looked to an officer to be able to provide both the correct guidance and an example. In recent times, whilst on Operations, some unfortunately have not provided that example as they feel it is not important. I have spoken to some whilst in theatre who argue their point; they are paid to be an engineer or a pilot, or whatever their particular branch may be, but appear to forget that they are an officer first and should be proud of the status they hold. One of my opening statements to the Officer Cadets when they arrive at Cranwell is that they should never underestimate the potential of changing the professional outlook of their subordinates by the way they behave and how important it is to provide an example in every area of military life, not just at work.

I received an email from WO Lister before he left for Afghanistan with reference to discipline and standards. I appreciate that he didn't actually write the statement but I thought it provided the impact that was required at OACTU. It stated:

*'Enforcing regulations may be unpopular but it demands a degree of integrity and moral courage to enact; a walk on by culture is unforgivable in a disciplined Service. It is expected that Joint and Single Service regulations are strictly enforced by Officers and Senior Non-Commissioned Officers and, in particular, that Junior Officers and Non-Commissioned Officers set an example regardless of their Service or Unit. Ignorance and failure to enforce regulations is a failure of leadership and moral courage and can result in disciplinary action being taken against individuals who contravene or fail to uphold Service standards.'*

I have had this statement mounted on boards and placed within every area of OACTU and I try to enforce its content where and when it is needed, to both cadets and staff. It underpins everything that is written within Air Publication 1 (Ethos and Core Values of the Royal Air Force) and not to understand its true meaning not only devalues AP1, but undermines our ability as a military force, particularly as we need discipline and direction as well as the soft skills of managers and leaders. I can remember reading a paper from the Equipment Capability Manager (Deep Target Attack) back in 2004 which stated to the effect that by 2020, as a military force we will be able to produce 10 x the effect, with 50% less manpower at 30% of the cost of ownership. Whilst I am not in a position to measure the effect, I am certainly feeling the effects of the other two parts of the statement. This to me, means that the officers who graduate from the College must be capable of providing an example for their subordinates to follow in accordance with the RAF Leadership Centres' attributes of a leader, with an effort to inspire the airmen and women under their command.

This is where I, as the CWO, do what I do. I have used the expression 'if you want a friend, buy a dog' on a number of occasions since I have been in post as I have to say things that are not always popular. I believe the position of CWO is to sit outside the bubble of both the staff and cadets and look at the College from a more strategic viewpoint; measuring cadet behaviour and critically analysing the results. The part after that is to inform the Wing Commanders and, in consultation with the OACTU Executive Officers, produce a tweak here and there in an effort to improve our training. This is at the same time as trying to ensure all Squadrons measure by the same standard. That is harder than it appears as each Officer and Flight Sergeant is allowed an element of flexibility, through the principle of Mission Command, to deliver the OACTU mission statement which is to:

*'Contribute to the operational effectiveness of the Royal Air Force by producing competent junior officers and non-commissioned aircrew capable of undertaking initial specialist training.'*

Having been given the rank to do the job, I found the transition from Flight Sergeant to WO quite challenging in some respects. Firstly, when patrolling the grounds I noticed how many people acknowledged me. Secondly, I noticed that my view point is given greater credibility. I found this initially difficult as I felt under a greater amount of pressure. If I produce poor results here at the College, then my annual appraisal, quite rightly, would say, 'when given the opportunity to fulfil the role of acting CWO, Mears wasn't able to .....'. If I was substantive in rank I would have had a greater level of confidence, knowing I was at least safe in my career and already promoted. However, the RAF Leadership Centre states one of the attributes of a leader as having willingness to take risks. I've heard an officer state 'If you can't take risk in the boardroom, it will be difficult to take risk on Operations'. I have stolen that quote and used it on a few occasions.

A Wing Commander once gave me his philosophy on life as a leader and it is from within his words that I now understand the difference between taking a risk and a gamble. 'Be prepared for the risk not to pay off, and if it doesn't, be prepared to be castigated for it.' Everyone makes mistakes, it is the way we learn which sets us apart from the animal kingdom. Einstein stated, 'insanity, is repeating the same thing time and time again and expecting a different result.' It can be argued that the ability to take risk is different from willingness to take risk, but if you can't learn from the mistakes, expect the trouble that follows.

I have almost completed my first year of an MBA which has opened my eyes to a different style of leadership and how academic knowledge has its place within the military. It has broadened my horizons and I now use academic references to back up my foundation of an argument. No longer is it because Mr Mears says so, which I based many of my previous decisions upon, Now I can quote an academic as a reference to back up my thought process.

The ability to conduct deeper analysis has benefited the Service in ways other than for personal development. I have greater confidence when discussing their Kings College studies with cadets. I am clearly not in a position to discuss subject matter in detail, but I do enquire about which topic they are researching and have been known to give an abstract point of view to create a different angle on the subject. A number of cadets have informed me how they have used our conversations as a foundation for their essays.

A number of people are surprised I am doing this level of academic study, considering my lack of a personal academic background. The College is a great place to broaden your mind and the ability to use the facilities College Hall has to offer again is also a privilege. I have spent many an hour in the evening using the library as there are fewer distractions there compared to home. The academic rigors have given me a new lease of

life and enhanced my capacity for growth in many different ways that are useful here. 'The most powerful tool any soldier carries is not his weapon but his mind' (Patraeus). I am now beginning to understand the benefits of that statement.

Having re-read this piece of work, I have noticed the number of times I have been offered advice from officers or used their quotes throughout my career. It does prove one thing for sure; whatever training is delivered and at whatever level, the officer corps does provide our airmen and women with good advice and inspirational behaviour. But, like the 'outstanding' OFSTED report recently received by the College, we should all be mindful of relaxing because we have been told we are good. At OACTU I believe we are continuously looking for ways to improve our training in an effort to produce even better officers capable of handling the many diverse and varied problems life in the Service now gives it workforce.

I have enjoyed my experience as the CWO enormously and have strived for excellence in all areas. It has given me an insight into a role in which I believe the incumbent requires fire in his belly and must be prepared not to sit back and allow time to pass by. It is equally important that he is fanatical about producing the best possible standards in order to turn out the best possible officers for the agile and adaptable RAF, that being the challenge of today's graduating Officer Cadet. I hope I have conducted myself appropriately and have done the role proud.

### Bibliography

Patraeus, David H. Beyond the Cloister. The American Interest online July - August 2007 issue.



# August 2016 - The College & Battle of Britain (5)

## THE BATTLE OF BRITAIN

Research by Peter Symes

*“Never in the field of human conflict was so much owed by so many to so few”*  
– Winston Churchill

It is believed that 90 Flight Cadets took part in the Battle of Britain.\*26 were killed in action, a mortality rate of 28.9%<sup>1</sup>. They were responsible for shooting down 116 enemy aircraft.

By the outbreak of the Second World War some 1,094 Flight Cadets from 43 Entries had passed out of the RAF College into the Royal Air Force.

Of that total 90 cadets from 29 of these 43 entries carried out at least one operational sortie in the Battle between 0001hrs on 1st July and 2359 hrs on 31st October 1940.

The Battle of Britain clasp to the 1939-45 Star was awarded on the basis of at least one authorised operational sortie with an eligible unit of the RAF during the period from 0001 hours on 10 July to 2359 hours 31 October 1940.

As a result 88 Flight Cadets qualified for this recognition. They included:

- 2 Wing Commander Station Commanders who flew with their Squadrons,
- the Wing Commander Officer Commanding the Fighter Interception Unit (whose role developing airborne radar/night fighting became increasingly important as the night blitz intensified),
- 27 Squadron Commanders.

They were deployed:

On Squadrons in 11 Group: 41  
10 Group: 23  
12 Group: 14  
13 Group: 14

Of the aircraft types they flew:

- 3 were on Defiants
- 8 on Blenheims/Beaufighters
- 34 on Spitfires
- 39 on Hurricanes

In actions sustained (including friendly fire), but survived, 19 aircraft were cat 3 (write offs).

A total of 116 enemy aircraft were shot down:

- 11½ Do17s
- 2½ Do215s
- 12 He111s
- 14½ Ju88s
- 9½ Ju87s
- 46 Bf109s
- 17½ Bf110s
- 2½ Unidentified

B of B Fighter Aces<sup>2</sup>

- Brian Kingcome CBF (9-36B) on 92 Sqn had the highest tally with 7
- Aeneas MacDonell (9-32B) OC 64 Sqn with 6½

With a tally of 6 each were:

- Harold Atkinson (9-37B) on 213 Sqn
- Charles Davis (4-39B) on 238 Sqn
- Peter Townsend (9-33B) OC 85 Sqn

After the Battle

Of the 64 survivors a further 19 (29.7%) ‘Cadets’ were killed in action later in the war.

## Roll of Honour

S29	<b>ANDREWS</b>	Lionel Vincent
S37	<b>ATKINSON</b>	Harold Derrick
A38	<b>BENSON</b>	Noel John Victor
S35	<b>COX</b>	Philip Anthony Neville
S38	<b>COX</b>	Alex Robert Temple
S31	<b>BADGER</b>	John Vincent Clarence
J39	<b>DALYELL-McKEAN</b>	Michael Hugh
A40	<b>DAVEY</b>	John Arthur Joseph
J26	<b>DEWAR</b>	John Scatliff
J36	<b>DONALD</b>	Ian David Grahame
S29	<b>DREW</b>	Peter Edward
S25	<b>GRANNUM</b>	Clifton Winnington
S36	<b>HANSON</b>	David Harry Wellsted
A38	<b>HOGG</b>	Richard Malyard
J37	<b>HOMER</b>	Michael Giles
S27	<b>HOOD</b>	Hilary Richard Lionel
S31	<b>JONES</b>	Norman Clifford
J38	<b>JONES</b>	John Sinclair Bucknall
A39	<b>LECKY</b>	John Gage
S35	<b>LEE</b>	Richard Hugh Antony
J38	<b>McKENZIE</b>	John Woffenden
J38	<b>PHILLIPS</b>	Ian William
J33	<b>SAWYER</b>	Henry Cecil
J38	<b>SHEPLEY</b>	Douglas Clayton
J37	<b>WAY</b>	Basil Hugh
J38	<b>WILDBLOOD</b>	Timothy Seddon
J29	<b>WILKINSON</b>	Rodney Levett
S29	<b>WILLIAMS</b>	Cedric Watcyn
J38	<b>WINGATE</b>	David Leslie
A38	<b>WORSDELL</b>	Kenneth Wilson

\* Roll of Honour opposite records 30 killed

<sup>1</sup> In comparison the overall loss of life during the Battle by aircrew was significantly lower at 17.2%.

<sup>2</sup> 5 or more kills (The highest scorer in the Battle was Sergeant J Frantisek on 303 (Polish) Sqn with 17 credited kills.

# August 2016 - The College & Battle of Britain (6)

## A CRANWELL FLIGHT CADET IN THE BATTLE OF BRITAIN

### GP CAPT DOUGLAS ROBERT STEUART BADER DSO\* DFC\*

By Hazel Crozier, College Curator

In the 75th anniversary year of the Battle of Britain, I thought it appropriate to highlight Cranwell's arguably most famous Battle of Britain son - Gp Capt Sir Douglas Bader. Of course, much can (and has) been written on Bader, but this is a snapshot of the interesting and unusual career of one particular officer.

Gp Capt Bader won a Prize Cadetship to the RAF College and joined as a Flight Cadet on "A" Flight on 6th September 1928. While at Cranwell he was a member of the College rugby, shooting, cricket, athletics, boxing and hockey teams. He graduated on 25th July 1930 having attained the Cadet rank of Under Officer. Bader's tutor was very astute as he wrote in the Flight Cadet character book that he would "Do well in a war situation, absolutely full out".

On graduation Bader was posted to 23 Squadron, flying Gamecocks at RAF Kenley. In 1931, representing the squadron in the pairs aerobatic competition at the Hendon Air Display on December 14th, he crashed a Bulldog at Woodley Aerodrome whilst performing a roll at a very low level. He lost both legs, the right above the knee and the left below. Whilst he was in hospital, a nurse outside his room hushed everyone as "there was a boy dying in there". On hearing this, his determination came to the fore as he was determined not to die. After being fitted with artificial limbs, Bader remained in the RAF. He was promoted to Flying Officer in 1932 but was most unhappy as he was not allowed to fly, and so retired from the RAF on account of ill health on 30th April 1933. Between the wars he worked for the Asiatic Petroleum Company which later became Shell.

With WW2 looming, Bader insisted on re-joining the RAF as a pilot. Passing a flying test at Upavon on 18th October 1938, he was re-employed as a regular officer.

After a refresher course at Upavon, he joined 19 Squadron flying Spitfire Mk Is at RAF Duxford on 7th February 1940. In March he was promoted to Flight Lieutenant and posted as a Flight Commander to 222 Squadron who were also based at RAF Duxford, flying Spitfire Mk Is. Throughout May and June, he flew Spitfire "D" in Sector Reconnaissance formations, and night flying sorties. He scored his first victory when he shot down a Bf 109 near Dunkirk, and also shared in a probable He 111. On 23rd June 1940, he was assessed by his Commanding Officer as an "exceptional fighter pilot".



The next day he was posted to 242 Squadron as Acting Squadron Leader (which was not given to Bader as a substantive rank until 18th June 1941). 242, a Canadian squadron flying Hurricanes from RAF Coltishall, had suffered heavy losses so morale was low and discipline lax when he took command. However, he was able to bring the squadron back to a good operational standard and on 11th July his logbook states that he "Attacked and destroyed one Dornier 17 off Cromer (Confirmed)", and two days later "attempted interception of Heinkel. Never saw it, investigated a cross country raid at Cromer".

During the Battle of Britain, Bader and 242 Squadron were heavily involved with formation flying and convoy patrols, many times flying two to three sorties in a day. On August 21st, he destroyed another Do 17. On 29th he noted in his logbook that he "intercepted Dornier 17 above cloud while flying alone. Hit it but saw no result as he dived into cloud. Subsequently confirmed and crashed into the sea." The next day he wrote that the squadron "intercepted 100 E/A (sic) with squadron. Shot down 12. Self two Me 110s." Later the same day, the squadron "met about 100 E/A (sic)...at 15,000ft just west of Enfield. Was up sun and above them; dived the whole squadron into attack from above and behind...Squadron destroyed 12 EE (Sic) for loss of nine. No bullet holes in any aeroplane"

For August 1940, Bader recorded 65 hrs 25 minutes in his logbook.

The next month, he destroyed two Me 110s, three Do17s shot down and a further two damaged, a Bf 109 and a Ju88 destroyed. This score is hardly surprising as, on 6th September alone, Bader flew five sorties. From 7th to 18th September he flew about three sorties per day.

Gp Capt Bader was awarded the DSO on 14th September 1940. The next day, which later became Battle of Britain day, he flew two trips with the Duxford Wing, whose total for the day was 52 + 8. Bader was one of the main exponents of the "Big Wing" tactic. In the face of much opposition, he, and the 12 Group AOC (AVM Sir Trafford Leigh-Mallory) pushed through and used their idea of the "Big Wing" tactic; a formation of four squadrons meeting the Luftwaffe as a Wing. As the month progressed, he was heavily involved in Fighter Command's now well-known "Big Wing" sorties. One such action on 18th September was described by Bader:

*"Wing consisting of 242, 310, 301, 19, 611 caught large bomber formation south of estuary at about 1730. We were at 20,000' under 10/10ths. E/A at 18,000'. Wing destroyed 30 + 6 probable and 2 damaged. E/A numbered about 160-50. Personal score 1 JU 88, 1 Do 17. No casualties in Squadron"*

During the rest of the year, Bader continued to fly patrols, and was awarded the DFC on 12th December 1940. He noted in his logbook at the end of 1940:

*"So ends 1940. Since I have had 242 Squadron (June) we have destroyed 67 E/A confirmed for the loss of 5 pilots killed in action and one killed diving out of cloud. The Squadron has been awarded one DSO and 9 DFCs."*

On 18th March 1941, he was promoted to acting Wing Commander and posted to RAF Tangmere. Whilst there he flew offensive fighter sweeps, and his total victories included seven Bf 109s destroyed, seven Bf



109s damaged, four probable Bf109s destroyed and he shared in the destruction of three Bf109s. A bar to his DSO was gazetted on 15th July and a one to his DFC on 9th September 1941.

On August 9th 1941, Bader's life took a new turn. Leading the Wing in bomber escort duties to Bethune, he found himself alone and involved with several Bf 109s. In the ensuing combat south of Le Touquet he claimed a Bf 109 destroyed and another probable, before he was shot down. He baled out, without his right artificial leg, and was captured. The German authorities sanctioned the RAF to fly out a replacement leg which was parachuted from an RAF aircraft. After he was captured, Bader also met the famous Luftwaffe fighter ace, Adolf Galland. As POW he made numerous escape attempts before finally being incarcerated in Colditz Castle where he stayed until his release on 14th April 1945.

After rest and recuperation, Bader was posted to RAF Tangmere as a Group Captain to command the Fighter Leader's School. It was not a successful appointment, and soon he was given command of the North Weald Sector, from where he organised and led the Battle of Britain flypast in September 1945.

Gp Capt Bader retired from the RAF in July 1946, returning to his previous employment at Shell and becoming the managing director of the Shell Aircraft Fleet in 1952. For his public service to the disabled, he was made a CBE in 1956 and was knighted in 1976. He died on 5th September 1982.

When Sir Douglas Bader's name is mentioned, it engenders a mixed response. Courage, bravery and determination he had in plenty, but set against this, both during the war and afterwards politically, he held and voiced many controversial views. But love him or hate him, from the time he walked through the doors of the RAF College as a Flight Cadet, to his death in 1982, his achievements were many and he was a great inspiration to others.

# Spring 1930 - Our Founder's Message (1)

## LORD TRENCHARD OF WOLFETON.

SOME have already written, and many will write later of the constant and eminent services in many directions, which have been rendered in peace and war to the Royal Air Force by our departing Chief of the Air Staff, of whom we publish a photograph in this JOURNAL. Some will recall that he was flying in 1912; some that he was the General Officer Commanding the Royal Flying Corps; some will recall the difficult days when he resigned his command and another charge—that of the Independent Air Force—had to be found for him.

At the Royal Air Force College we shall remember him not least as the founder of the College in February, 1920, and we think it not inappropriate to recall the words he wrote in the first issue of the College Journal about eight months later:—

“ I hope this magazine will live and prosper, and be a great help in forming and guiding the destinies of this College.

“ It was decided to form this Cadet College because it was realized from the first that such a College was the essential foundation of a separate Air Service. This College, in conjunction with the School of Technical Training for Boys at Halton, will have the making or marring of the future of this great Service, which was built up during the war by all the gallant Pilots and Observers and other ranks who fought through it, and won a name in the air second to none in the world. It always held, and finally conquered completely, the German Air Service. If it is to continue its great work, which I am convinced we all intend that it shall do, we all realize that it has to live up to its war reputation, and we must ensure by every means in our power that it does so.

“ We have to learn by experience how to organize and administer a great Service both in peace and war, and you, who are at present at the College in its first year, will, in future, be at the helm. Therefore you will have to work your hardest, both as cadets at the College and subsequently as officers, in order to be capable of guiding this great Service through its early days, and maintaining its traditions and efficiency in the years to come.

“ H. TRENCHARD.”

It is our duty to see that these words about the College and the JOURNAL are fulfilled to-day in a manner worthy of a man who, already in the first place, has deserved well of his country, and to whom this country can look confidently for fresh victories in peace or war for many years to come.



*By courtesy of "The Aeroplane"*

MARSHAL OF THE ROYAL AIR FORCE, LORD TRENCHARD  
G.C.B., D.S.O., D.C.L., LL.D.

# 1985-1986 - Recollections of Trenchard (2a)

## RECOLLECTIONS OF LORD 'BOOM' TRENCHARD

This article has been prepared by Gp Capt Arnold Wall OBE RAF Ret'd,  
31 Alton Street, Nelson, New Zealand.

I saw 'Boom' on four occasions between 1926 and 1943, and this is what I remember of him.

In December 1926 I was a first-term cadet at Cranwell, having been nominated to a cadetship by the Government of New Zealand. Our term was as yet too raw to comprehend fully Boom's stature in the service we were joining, but we could sense the ripple of excitement among College instructors and senior termers when it was announced that he was to take the passing-out parade at the end of the year.

It was a typically freezing Cranwell winter day, but a sunny one. We formed up on the parade ground, the great man and his entourage arrived, the inspection began. Boom was evidently in no hurry; he was taking his time, whereas some inspecting officers tended to strut when making an inspection. Boom seemed to stroll, refreshingly informal and relaxed. As he passed me I could get a good look at him. The first impression he made was of *bigness*. He was a tall man, heavily built, bearish – this accentuated by his great-coat – his head seeming on the small side for a man of his size. Heavy eyebrows, shaggy; eyes deep-set and rather close-set, very keen in expression but friendly; greying moustache worn rather more heavily than was then fashionable. His whole bearing was kindly and interested, an amiable Great Bear.

After the parade was dismissed all adjourned to the gym for speeches and prizegiving. We knew why he had been nicknamed Boom and were intensely curious to discover whether he would speak to us with the voice of a howitzer, but in this he was a disappointment. He was gruff, certainly, and loud and clear, but not a boomer, on this occasion anyway. What was abundantly obvious was that he was no silver-tongued orator. He gave no impression of having prepared what he was going to say but seemed to be thinking

on his feet, not enjoying it at all, barking out disjointed, half-finished sentences with considerable pauses for inward rumination. All the same, the strength of the man was the paramount thing, and though his delivery was anything but polished, the mind behind it was obviously no light-weight.

I wish I could remember even one single thing that he said, but I suppose one was so fascinated by watching him that one wasn't really listening.

The second time I saw him was early in 1929. By this time I was a P/O in 7 Squadron under the command of one Wing Commander CFA Portal, stationed at Worthy Down, near Winchester. Boom was about to retire, and the word went out that all permanent-commissioned officers in Britain were to gather in the RAF Uxbridge cinema to hear his farewell address.

Short-service officers everywhere, uninvited to this party, were quick to sense a dazzling opportunity: for one whole working day the Air Defences of Great Britain would be in their envious paws and, as the short-service boys at Worthy Down delightedly pointed out to us, a stick or two of 112- and 230-lb bombs on the cinema would open broad sunlight avenues to permanent commissions and promotion – P/O Prune might find himself in a seat on the Air Council in a matter of days....

Alas for these bright dreams – the day was dank and miserable, even the birds were grounded. My fellow ex-cadet, John Llewellyn, and I were driven up to Uxbridge by my flight-commander Chinky (FH) Coleman and his deputy, Pat (EPM) Davis, the one ex-RFC and the other ex-RNAS, both great chatterboxes and full of entertaining reminiscences of Boom in the brave old days of '18. So we arrived outside the cinema in a cheerful mood. Dozens of cars were parked there in the cold drizzle, scores of old buddies

who hadn't seen each other since the Armistice were greeting each other, making rendezvous for reunion in town after the ceremony; the mood was festive. But once inside the building it sobered up. We began to realise what it was we were here for, and this deepened when Boom and his Air Council made their way on to the stage.

He spoke as he had at Cranwell. Gruff, pretty inarticulate, but this was, I think, a prepared speech. I don't remember much of what he said, but one of his metaphors sticks in the mind. He stressed that all that he and his contemporaries had been able to do since the RAF was formed was to lay foundations for the future: 'Foundations (long pause), foundations for the future (pause). For you fellows to build on (pause). Could be a cottage, could be a castle. I don't know (pause). Nobody knows. Whichever it is, hope you'll find that the foundations are sound, strong....' The whole performance didn't last very long, and then we filed out into the cold and damp. The change in mood was quite extraordinary to witness. People stood about very quietly for a bit, as after a funeral, then dispersed.

The atmosphere in Chinky's car was the same. He and Pat said nothing for several miles, then talked quietly about Boom's successor; he was, they agreed, a good chap, the obvious choice, but.... Back in the mess we were greeted with ribald questions from our stay-at-home brethren. It wasn't easy to reply in kind.

The third occasion came in 1940, April, I think. By this time I had lost an eye flying in India and had had to transfer to the Equipment Branch. I'd had the great luck to be posted as a S/Leader to command No. 1 Air Stores Park, a mobile field unit supporting squadrons of the Air Component of the Army, the next-best thing to being with the squadrons themselves. We were operating from Bertangles, a village whose name is well known in RFC/RAF history, a few miles out of Amiens.

Component HQ at Arras rang one fine morning: Boom was in France, touring round various units and would be coming to us tomorrow. There were to be no special parades or fuss; we were to carry on just as

usual, show the Great Bear round and give him a simple lunch in the Mess. He would probably like to have a look at the men's billets, and to have a yarn with any old ex-World War I reservists, of whom we had a considerable number. Boom duly arrived at 1000 hours, punctual to the dot and accompanied only by his PA. He seemed not much older than when seen in '29; he was a bit hard of hearing but only slightly so, extremely affable, asked what I thought were very perceptive questions considering that he couldn't have had much first-hand knowledge of the mysterious arcana of equipment supply.

The main billet for the chaps was a long, bare room on the first floor of a wing of the local chateau, holding about 30 to 40 men. I took him up there, inwardly praying that it would be as clean and tidy as it usually was, and was not disappointed. At this time of day it should of course be empty, but in fact it had one occupant, an elderly, very quiet Corporal Driver MT who had had a mild dose of flu and on the MO's orders was taking the day off. He was sitting on his bed, properly dressed and shaved, thank God, and sprang up when we came in. I introduced him to Boom, and his usually rather morose face lit up: 'You won't remember me, sir, but for about two weeks I was your driver when you came out to France in 1918.' Boom was delighted. He did remember the chap, and the two of them began an animated discussion; the PA and I withdrew out of earshot – somehow it seemed the right thing to do – but it was pretty to watch the two old veterans chatting away with such great animation.

We then walked and drove round the dispersed sites and by 12 were back at the Mess, a small affair as we had only ten officers all told, and the building was the summer cottage of some Parisian family. Our cook was a character; he had been stationed at Bertangles in the first lot, but as a blacksmith, and he was remembered from those days by quite a few of the older villagers. He was no brilliant chef, but he could knock up surprisingly good meals from the rations.

Boom chatted to him, was offered a sherry and refused it, as we had been told he probably would, ate his blacksmith meal in

# 1985-1986 - Recollections of Trenchard (2b)

great good humour and, when it was finished, he drew me over to a map of NW Europe that we had pinned up on the wall. During the morning I had been skiting a bit about our mobility – we had proved that we could get the show on its wheels and away within an hour of a movement order – and Boom led off with this: 'You say you can be on the move at an hour's notice. That's good. Now, tell me where you'll be moving to.' Who the hell could know that? But one had to say something, and the best I could think of was 'Wherever Component HQ tell us to move, sir.' 'That's not what I hoped you'd say.' He sounded very serious, and all I could think of was to ask, 'What should I have said, sir? I hoped you'd say "Forward! Forward into Germany!"' I was disappointed in the dear old man, for I thought this was a damn silly thing for him to say. The Unit's morale was good and firm, no jitters perceptible, but at that stage of the phoney war few sane people would imagine that the German forces would crumble as easily as all that. It took me some time to realise that he was trying to gauge morale in that curious period and didn't necessarily mean what he said. Anyway, his good humour soon returned and he said pleasant things before he set off back to Arras.

The last occasion was in 1943. By this time I was on the directing staff of the wartime Staff College at Gerrards Cross. Each member of the DS had to give one set lecture to each course, and my pick was RAF History. My predecessor had, I thought, gone too far above the heads of the students; very few of them were pre-war regulars, and several came from the Dominions. What seemed best would be an almost kindergarten-level narrative of how and why the RAF became an independent service. There were quite a few things that I couldn't find explained in reference books, so I decided to tackle Boom, the fountainhead, for help with them. An appointment was gladly given and I went to the office he had somewhere near Blackfriars Bridge. He was in a dark suit, he still didn't seem to have aged much; he could still hear quite clearly. Tea and biscuits were laid on by a secretary, and off we went.

In these days, of course, one would have

taken a tape-recorder, but in 1943 one could take only a notebook. I took copious notes, naturally, and had them typed out. Like a damned fool I didn't leave a copy of them as, of course, I should have, in the Staff College library. The only copy was in a suitcase stolen a year or so later, so all I have to go on now is a far from perfect memory, 42 years later.

One of the most interesting parts of the discussion was his recollection of the bitter Admiralty/Air Ministry wrangling of the 1920s – the *Times* used to be full of angry letters by admirals with improbable names; but rather to my surprise Boom brushed these aside. He said, in effect, that the Admiralty were not the real danger to RAF independence; much sound and fury, but they had no real understanding of the subject. It was the War Office, and he was very emphatic about this, that – if they'd had a mind to – might all too easily have succeeded in setting the clock back. We were lucky, he said, that the CIGSs of the 1920s had been, on the whole, sensible men. Well then, what did he think about the Fleet Air Arm having obtained independence in the 1930s? 'Probably the best thing that could have happened'; he was very firm about this. He said that Churchill had in some way been responsible (his exact reasoning on this escapes me now), and went on to declare, 'Winston's been of great help to the Royal Air Force at times. (Pause, while he walks up and down swinging a bunch of keys on a long chain.) But he's always been a Navy man at heart...Big battleships...very impressive to him.' Then he suddenly said, 'Those Fleet Air Arm pilots...splendid fellows...none more gallant...no praise too high for them.' He was really moved when he came out with this.

I can recall with accuracy only two other matters he talked about, and these because I had always felt personal curiosity about them. Both trivial. The first was how the colour of the RAF uniform had been chosen, and by whom. There were two legends about this, both picturesque, and Boom might be able to settle the matter once and for all. One was that in 1917 the mills of Bradford had turned out a million or so yards of light-blue cloth for the Imperial Russian cavalry; this

was left on their hands when the revolution broke out and was still in store on 1 April 1918; it seemed eminently suitable for the new Service. According to the other account, the member of Air Council responsible for the choice of colour was in the habit of dallying in the boudoir of a celebrated musical-comedy star named Lily Elsie. When samples of colour were brought to him for decision he, very sensibly, decided to consult his fair Lily. 'This one, darling,' she is alleged to have said, picking out what we have worn ever since, 'because it matches the colour of my eyes.' Unfortunately, Boom could throw no light at all on this interesting question and was most apologetic that he could not. He had been much too occupied with more important matters at that time, and anyway had never been much concerned with questions of dress: 'Some Army men, you know, obsessed with uniforms...medal ribbons...all that kind of thing. I've never been interested (pause). Don't think I've ever been what they call properly dressed.'

Next I asked him about the design of the RAF ensign – could he remember? He cheered up at this. 'Yes, yes, I can tell you something about that. They (meaning his staff) came to me and said we'd have to have our own ensign. Brought me a painting of what they suggested. Explained light blue for the sky, the roundel, obvious. I thought it very good. But then they warned me that the College of Heralds, who know about these things, had said that the roundel wasn't acceptable. Wasn't heraldry. Couldn't be used. What did I think? I said I'd take it to His Majesty. He'd have to approve it anyway.' The Great Bear was enjoying this memory. 'Had to see King George about other things soon after that. Took the painting with me, showed it to him, told him I recommended it. Then I had to tell him that the Heralds wouldn't pass it...roundel not heraldry. "Well, Trenchard," he said, "if it wasn't heraldry before, it will be from now on." And he took up his pen and signed the drawing, there and then.'

Boom gave me a couple of hours of his time that day. The pity is that I was such an absolute fool as not to put the record into safe keeping; I'll never forgive myself for that.

# Autumn 1935 - Tributes to AC Shaw (1a)

## One great man talks about another

### AIRCRAFTMAN T. E. SHAW

#### A LAST CONVERSATION.

BY PROFESSOR R. D. L. B.

1925 I HAD known Colonel Lawrence on and off for thirteen years. He served at Cranwell about 1922-27 as an aircraftman, and he paid me a long visit at the College only a few weeks before his death.

We all knew who he was when he served at Cranwell, and most officers and airmen respected his incognito. We knew that he did not wish to mix with officers, because he wanted to avoid what was still at the front of their thoughts, and to forget certain beastly or painful experiences which are recorded in his great book. He was happier in the light-hearted conversation of young airmen who had not known the dangers and discomfort of war. We bade him "Good morning" when we passed him, but we never discussed anything. We used sometimes to consult him on Service topics, but we always treated him as an airman.



T. E. L.

(With apologies to Mr. Eric Kennington).

He once took of his own free will a most interesting part in a course I was giving to officers on Imperial Geography, and gave a discourse on the Middle East which will not be forgotten by those who heard it.

Once or twice when I wanted his advice on a point of scholarship I used to write him a note. He would send an elegant reply, and when he was writing "The Seven Pillars of Wisdom" he sent me the printer's proof, in which I drew his attention to one or two small errors. There is in the JOURNAL a facsimile of a letter in his fine writing in jet-black ink, in which he allows me to reproduce an extract from the proof.

I remember that this proof had been roughly bound by Lawrence himself, and on the outside he had mischievously written a title—"The Complete Aircraftman." This book he afterwards presented to the College Library. We bound it more suitably. Though anyone may read it, and many officers and cadets have availed themselves of the opportunity, we have insured this book for £250, and we keep it under lock and key. It is valuable, being unique owing to the amount of autograph in it.

In general, the text of the book is remarkable; it is more intimate than "The Revolt in the Desert." It was written by Lawrence in a room at Leadenham, and is in the manner of Doughty, Burton and Philby, having that mastery of English which the desert seems to induce.

At Cranwell, Lawrence served in "B" Flight and was of great assistance to F./Lieut. Green, his Flight Commander. He was indeed The Complete Aircraftman. His kit was always scrupulously clean, brightly polished and neatly turned out. In the Flight-Office he was responsible for the tidiness of the room and the lighting of the fires. He kept the

log-books with meticulous care, to the joy of the Flight officers, and he never shirked a fatigue. He was always scrupulously correct in his demeanour, and I have seen him cheerfully sweeping out the Officers' Mess after a dance. I have also seen him, during the interval in the morning, carrying about six cups of tea to his fellow-airmen, a bit of conjuring done without that strain on his face habitual to conjurers and ventriloquists.

Indeed, the things which I remember about him best were his conspicuous health and good cheer, which were an answer to those who rebuked his lowly status. I used to see him swinging along the road with a young orderly, the picture of happiness, both men at ease and talking hard. It was amusing to think that an Aircraftman and a Fellow of All Souls should have so much in common. But Lawrence had something in common with everyone, and he entered the ranks just as in mediæval times many learned and successful men entered a monastery, or an Order like the Templars.

He rode a speedy motor-cycle and went at a dangerous rate. His motor-cycle—a gift, I believe, from the manufacturers—was a Brough Superior. On this bike he nearly killed himself while he was here, but was not at all perturbed. Indeed he made a remark to his rescuer which showed what little store he set by his life. Another day, in cranking a car, he broke his wrist, but without a word of complaint to the owner of the car he went off to our hospital and was treated by Wing-Commander Huntley. As soon as the Wing-Commander's back was turned, Lawrence walked out of the hospital, much to the alarm and despondency of the staff. The reason he gave was that he could not stand the constriction of a ward a minute longer; he suffered from claustrophobia, and wanted to return at once into the open air, and bigger rooms.

After Lawrence left Cranwell, I did not see him for some years, although we exchanged a number of letters, all of which I have kept and treasure, except those which I have reluctantly given to my friends. For these letters have that air about them which have preserved letters in the past. Most letters go to the waste-paper basket after a week or two, but others are self-preserved. Lawrence's letters are beautifully written in jet-black ink, and are delicately phrased, and there is always something rare in their message and in the words which convey it.

Some years ago I was having tea in my quarters with a party of cadets, when, to our pleasure and surprise, Lawrence came in. He just said, "You know who I am," and told us he had just come up from Bristol non-stop on his motor-bike.

I hurriedly ordered from the Mess some fresh food, and indeed gave him a very good tea, as he was famished and very thirsty. He became most cheerful and talked to us at length, and with much range and precision, about his ideals in classic art. He must have been with us about an hour and a half. We talked about the figure of Queen Nefertiti in the Berlin Museum, and we asked him what he thought of Epstein's work at St. James's Station. He replied that, although these sculptures were ugly out of their context, they were appropriate in a cubist building.

During the next years I continued to correspond regularly with him,

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and I frequently consulted him in connection with the JOURNAL, for which he wrote anonymously more than one article. One of the last articles he sent me after I had written for it, was a remarkable translation of the Odyssey. I wrote to him urging him to begin the translation of the Iliad, partly because he was the man for such a task, and would have produced something worthy, and partly because I thought he might need the money. His rendering of the Odyssey was in a volume *de luxe*, sold at about £15 a copy. I could not afford it myself, but by the generosity of the author and the publishers, I was given the loan of it for a fortnight, and was able to show it to many officers and cadets, who took pleasure in the elegance of the text and the beauty of the type. The book was afterwards on view in the British Museum, as a specimen of British book-making at its best.

Lawrence told me that he always devoted a whole day to ten lines of translation, and that he wrote two copies of them before he made the final fair one. The secret of handling the Arabs, he said, was an unremitting study of them. A similar attitude to scholarship places the translation of the Odyssey and "The Seven Pillars of Wisdom" among the great books of the world.

The last time I saw Lawrence was last term, a few weeks before his death. It was during the morning break. My room was full of people, and as I walked towards the door talking to one of them I saw him standing humbly outside.

He was untidily dressed in ancient flannels and a coat and muffler, which had seen very much better days. I know that at least one of my visitors wondered as he passed by who was this slipshod apparition. Although I had not seen Lawrence for some time, and he had aged and lost much of his youth, I recognized him at once and had pleasure in showing him round the College, and of talking to him on all sorts of topics, for about an hour and a half.

I offered to lend him my car to show him round the station, but he would not accept. He had served here with so much happiness that he feared that a return to his old haunts would induce melancholia. I took him first to see the pictures in the Ante-Room, in the choice of which he had played a big part. We talked together of Tuke, whom we had both known at one time. Tuke is the painter of the sailing-ship scene in the first of the cadets' ante-rooms. Lawrence told me he had often been a model for Tuke in his youth; and I had watched him at his easel.

After going through the ante-rooms we went to the cadets' quarters and spoke to "Colonel" Young, who, of course, recognized his visitor, and to two other College servants whose names I cannot recollect.

Then I took him to the main lecture hall, and the library, where I introduced him to Capt. C. W. Pollock and Mr. L. E. Fisk. While he was in the library we showed him the copy of "The Seven Pillars of Wisdom." He studied this book carefully and explained to us the significance of some of the illustrations. He was a modernist in art.

I asked him why he did not re-engage in the Royal Air Force. He told me that if he signed on for another twelve years he would be too elderly for the ranks. He added with a smile that he had already reached the

giddy height of A.C.1. He said that the idea of a man of sixty being in the ranks was preposterous. I suggested that he should apply for promotion, and take the necessary examinations. He said that the educational difficulties were too great.

This was a typical remark made mischievously by a man who was an international scholar in Arabic and archæology, an unusual linguist and a Fellow of All Souls. I suppose a Fellowship of All Souls is the highest academic honour in the world.

I do not know how the train of conversation started, but presently we asked him what he was going to do to balance his budget in the future. He told us he had 25s. a week to live on, and he thought that enough for any man. I remarked that he would never be able to maintain his motor-bike on that. He replied that he was giving up the bike, and he showed me his push-bike on which he had already come a great distance and on which he was proceeding to Cambridge. I felt sorry to see him so worn and, I thought, tired.

He told me that if ever he went short of money he could always translate books from German and French. I urged him once again to translate the Iliad, and not keep his talents laid up in a napkin. We talked at some length about what he was going to do when he left the Service. He told me that he was very tired and getting old. In fact, he was 47 years of age, but there was no doubt that he was looking more tired and bleached than when I saw him last.

I asked him if he would attend our College Literary Society one evening, and I think he would have come, but he said: "For the moment I am 'other ranks' and I do not feel happy in the company of officers." But I gathered he would come one evening; as he was always interested in the College.

\* \* \*

So we have lost one of the great figures of the century—a man whose death was signaled by eulogies from the Sovereign downwards. For, after his death, the King, who is more conversant with facts and men than most, sent this message to Lawrence's brother: "The King has heard with sincere regret of the death of your brother, and deeply sympathizes with you and your family in this sad loss.

"Your brother's name will live in history, and the King gratefully recognizes his distinguished services to his country and feels that it is tragic that the end should have come in this manner to a life still so full of promise."

Mr. Churchill wrote of him: "I fear, whatever our needs, we shall not see his like again."

Lawrence had the qualities of great personal bravery, initiative and learning, whether he was designing a strategy or leading a charge, or digging an ancient site. He spoke with a modulated voice and with a twinkle always in his eyes. What he said, like what he wrote, had an unaffected finesse, and impressed itself on the memory.

There was no mystery at all about him. If he was a mystic he was a practical mystic. A romance about him was conjured up for young men

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and maidens by a cheap American journalist. He was one of the great men who can mix freely in all classes of society, but he preferred the company of his intellectual inferiors. He wanted rest and oblivion after the troubles, mental and physical, which he had endured in Transjordan and Arabia.

Some years ago I had gone up with some flight-cadets from our Literary Society to see Marlowe's "Dr. Faustus" at Oxford; and on the following Sunday I was at a loose end. As chance would have it, I turned my steps to All Souls' College, and when I got into the porter's lodge one of the batmen—or scouts, as they call them at Oxford—asked me if I should like him to show me round.

I accepted the offer and I found out by accident a few minutes later that he had been Lawrence's scout. After showing me all round this beautiful college, which is remarkable for having only about two undergraduates, he showed me several relics of Lawrence, including a dagger of solid yellow gold which he had given to the College, together with other mementos.

He also showed me the original of Augustus John's drawing in the Frontispiece of "The Revolt in the Desert," and told me that an American tourist had offered him £25 for it. I advised him not to sacrifice it. But what interested me most was a letter written by Lawrence, which I was allowed to read.

In it he described how he had received that day several decorations from His Majesty and, after walking across the Tower Bridge, had dropped them one by one into the Thames beyond the reach of the drag-net.

Everybody knows how as a white Arab he had hoped to build up an Arabian Empire or a succession of Arabian States, from Mecca to Cilicia; from the Red Sea to the Shatt-el-Arab; and from the coast of Palestine to Persia. He had made a number of promises to the Arabs, and had been unable to fulfil them. He had been repulsed by the policies of Sykes and Picot, the good nature of Balfour, and the sentiment of Rothschild.

He felt, therefore, that he had let down the Arabs. Whether he had exaggerated the ambitions of the Arabs by his promises does not matter: nor whether he had alienated the goodwill of the French, who, he told me, refused him a passport into any country under their control.

\* \* \*

While I have been in Lincolnshire I have heard so many foolish criticisms of him that I have been dismayed by the critics' lack of imagination. Many people contended that he should not be in the Service, because he would not wear any ribbons. They were obsessed with paragraph this and sub-paragraph that, forgetting that it was a distinction to have such a man in our Service in any capacity, particularly perhaps as an aircraft-hand. Besides, no one who knew Lawrence would think or say that judged by the most utilitarian standards, he was unworthy of his pay and rank. There is no doubt that he rendered notable service to the R.A.F. in connection with motor-boats.

To critics of a higher category, particularly to historians who have the

Thank you very much. I hope you will cut out "Prince of Mecca", for that is an American invention and impossible in fact. "Emir Mekky" = Prince of Mecca, + denotes actual temporal overlordship. It could not be an honorific — and King Hussein was seen in the news to honor me. We did not get on together.

Also I was not among the first to enter Damascus; indeed my position there was very equivocal. I found an empty well amongst our leaders, when they got there — and knowing there were things urgently required I compelled them to do what I wanted. That was all.

Otherwise that is nothing which is not a fair expression of opinion. Of course I do not share your view of the literary merit of the book. It seems too literary for a memoir, + too truthful for literature. However that doesn't much matter.

The A.O.C. asked me for a copy for the C.C. library, + this I've sent him. So you will be able to look at it, when you wish.

The facts about publication are that this full text will not be published in my lifetime: but about 150 copies are going to friends of mine, without reservation: so knowledge of it will soon get about. They will be distributed in the end of November. An abridgement is to be published by Cape in March 1927 and the serial publication of 40,000 words of this abridgement can be begun by the Daily Telegraph after Dec. 15 next. So your long quotation shouldn't appear before the D.T. has had its whack. After that do anything you please. Other people will be doing the same.

T.E.S.

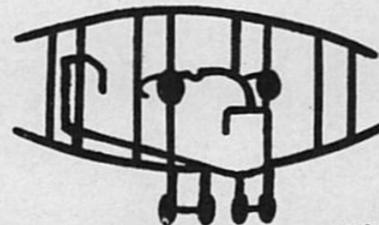
# Autumn 1935 - Tributes to AC Shaw (1d)

privilege of being wise after the event, it may be yielded that Lawrence backed the wrong horse; that he should have conciliated the support of Ibn Saud, not of the frail Sharifian family; that he should not have alienated the French, nor made such generous promises to the Arabs. It may be that the Arab campaign was only a minor campaign. But these contentions, whether correct or not, are beside the point, and miss the essence of the matter and the man.

If any mystery has been conjured up about Lawrence, the mystery has been useful in this materialistic age, which requires a little mystery and romance. But those who knew Lawrence best know that there was no mystery about him; that he was just a charming man, and a great intellectual to whom nothing was difficult. He was always revealing unexpectedly some new facet of intellect. Everyone liked him and respected him. It may be that he courted publicity by his studied obscurity. But if he did, he despised himself for it; and none of us is infallible. Besides, all must be forgiven to a man who has made history. He performed exploits unsurpassed in guerrilla warfare, when he harassed and paralysed with 3,000 Arabs more than twelve times their number of Turks. He evolved a new theory of war; he substituted for concentration dispersion. He practised a kind of bloodless strategy by which he paralysed his opponent by an intangible ubiquity. All will pardon this man if he was occasionally impish, exasperating and baffling, if he encouraged occasionally an aura of mystery.

When I last saw him he was just going off on his push-bike to Cambridge. I offered again to drive him round the camp, but he seemed reluctant. I offered to get him some food from our Fancy Goods Store, but he was not interested in food.

He had a long conversation with me on the steps of the College, and I remember the last words which I said to him were urging him not to waste his life as a modern Diogenes, but to settle down again to worthy and useful work. But he just laughed in that serene, inscrutable and boyish way of his and pedalled off.



HINAIDI

J.C. TAYLOR

# Autumn 1936 - Tributes to AC Shaw (2a)

## LAWRENCE OF ARABIA

*(Being an address delivered by Lord Halifax in St. Paul's Cathedral at the unveiling of a Memorial to Colonel T. E. Lawrence on 29th January, 1936.)*

I TAKE it as an honour paid to the University of Oxford that her Chancellor should have been selected to perform this ceremony, and to say something about one of the most remarkable of Oxford's sons. It is my misfortune that it never fell to me to enjoy that close friendship with him, the memory of which is the possession of many here, so it cannot be of their Lawrence that I must principally try to speak. Rather from a standpoint more detached must I make some attempt to appraise the character and performance which we here commemorate.

It is significant how strongly the personality of Lawrence has gripped the imagination of his countrymen. To comparatively few was he intimately known; his fame rested upon achievement in distant corners of the world; to the vast majority he was a figure legendary, elusive, whose master motives lay far outside their cognizance. So true it is that men often admire most what they are least able to understand.

There has been no character in our generation which has more deeply impressed itself upon the mind of youth. Many of us can remember when we began to be told stories how impatiently we used to ask the teller if it was really true; and Lawrence's life is better than any fairy story. As we hear it we are transported back to the days of medieval chivalry, and then we remember that these things happened not yet twenty years ago, and were mainly due to a force present in one man, that we acknowledge under the title of personality.

To Lawrence in an especial sense Oxford played the part of understanding guardian. Trained of old to discern the signs, she readily knew in him the divine spark that men call genius, tended and breathed upon it until, self-taught, it kindled into flame. And it is perhaps not untrue to say that the discovery by Lawrence himself of his own powers and destiny was in no small measure due to their earlier recognition at Oxford by Dr. Hogarth, whom he was accustomed to describe as a great man and the best friend he ever had. So, with the stamp of her approval, Lawrence set forth from Oxford eastwards, a crusader of the twentieth century on behalf of peoples and causes which must remain for ever associated with his name.

It was an accident that this phase of Lawrence's life should have synchronized with that most searching trial of his country which was the occasion of his rendering her such signal service. He had long dreamed of the restoration to freedom of the inhabitants of Palestine and Arabia, and it was through the reactions of the Great War upon those lands that the chance came to realize his dreams. Others worked with him through the perils of the strangest warfare that those years witnessed, and share with him the glory of achievement. But he, as his collaborators were first to own, was the inspiration and fiery soul of the revolt which shattered Turkish misrule and made free men of the children of the desert.

In 1914 Lawrence was barely twenty-six, known only to Oxford and the small circle of his friends; when the war ended his name was on the lips of all the world. For nearly three years he had organized and directed against the enemy a race of nomadic tribesmen, difficult of combination in sustained military effort, and, great captain that he was, had turned what might have seemed their chief disadvantage to the invention of a new strategy. Conscious that he had at last found a cause to which he could consecrate all his energies, privation and physical danger became only incidents in the attainment of the great end of his endeavour. By true gift of leadership he was able to communicate to others his own standard of achievement. Each man who looked to Lawrence for instructions knew that he was asked to undertake no duty that his leader would not, and could not better, discharge himself. Small wonder that he could count upon a devoted loyalty almost unique in the annals of military adventure, a loyalty which over and over again carried forlorn hopes to complete success.

The campaign ended, Lawrence found himself engaged in what was for him the more arduous struggle of the peace. Even before the war ended questions, to which for him only one answer could be given, were being caught up in cross-currents of international policy and rival national interests. The mark that these days left upon him was deep and ineffaceable. The strain of their anxieties was heightened by the strain of writing his own record of events, to which at whatever cost he felt impelled by historical necessity.

Even at Oxford, where he sought in All Souls to find the rest that the University offers to her returning sons, he found himself unable to escape the burden that pressed upon his soul. Relentless his fame pursued him, forced him from Oxford, made him fly even from himself, to find in change of name, scene, and occupation that loss of identity through which he hoped to win reprieve from his distress.

Thus he came to join the humblest ranks of the Royal Air Force, the youngest of the Services. The future lay with youth, and here for Lawrence was the very embodiment of youth, with all its life before it. His imagination became suddenly on fire with the thought of what the air should be. Sharing its fortunes on terms of simple comradeship, he might inspire the young Service upon whose quality he felt that some day the safety of his country might depend. He called the conquest of the air the one big thing left for our generation to do. It is not without significance that the bulk of the contributions for the memorial unveiled to-day has come from shillings and sixpences given by the ranks of the Royal Air Force. To his decision we owe it that he was able to put into final form the narrative of those desert days, in prose which will live so long as men read the English language, and give Lawrence yet another claim to immortality.

These years from 1922 to 1934 among the unnamed rank and file were perhaps the happiest of his life. Both his mechanical and creative sense were satisfied in the work of perfecting the new speed-boats for the Air Force, and when he returned to private life it was a man restored, desiring yet doubting the taste of leisure, who went to make a quiet home for himself

# Autumn 1936 - Tributes to AC Shaw (2b)

deep in the land of Wessex, beloved of that other master of the English tongue whom he so much revered. Here it was that after a few brief weeks he met catastrophe in what seems to have been characteristic sacrifice of self to avoid a collision, and a week later died.

So passed Lawrence of Arabia, leaving behind him a memory and an example. For he always maintained that he was no more than the average of his time; what he could do another might, granted the will and the opportunity.

What was the secret of the almost mesmeric power that he exerted? So different was he from other men that they could often only catch part of his singularly complex personality, and it is perhaps just in this difficulty of judging the man whole that lies the true evidence and measure of his greatness. Nor, with his strain of puckishness, was Lawrence himself averse from deepening a mystery, at times not less baffling to himself than to many of his friends. No one can read his private letters, in some ways the most arresting of his literary work, without being conscious of sharply alternating moods, almost the conflict of competing personalities.

But, this said, there are certain fixed points that hold firm in contemporary judgment. All those who knew him agree that he possessed some quality to be best described as mastery over life. While, like all men, he owed much to the influence of heredity and environment, he, more than most men, had or acquired the capacity to mould life instead of lending himself to be moulded by it. Here lay the secret of his command over affairs, over others, and last, but not least, over himself. It is seldom that the direction of world events can be so clearly attributed to the dynamic force of a single individual. He saw a vision which to the ordinary man would have seemed like fantasy, and by the sheer force of his character made it real. From his fellows he drew without exertion an allegiance unquestioning and absolute. Most men when they are asked to give are tempted, like Ananias, to keep something back, but Lawrence asked everything, and, because of the authority with which the demand was made, everything was given. Many elements contributed to the acceptance of this superiority, unchallenged and unsought. Great powers of intellect, of imagination, of intuitive understanding of other men's thought, but above all else must rank the overwhelming conviction that he gave of moral purpose.

It was not merely that he brought to bear upon life the concentrated strength of all his being, but that this faculty was eloquent of victory in the stern struggle for self-conquest. All the things that clog—ambition, the competitive race, possessions, the appetites of the natural man—all must give way if real freedom is to be won. Life, free, unhampered, unalloyed, alone deserves the name. As he said: "The gospel of bareness in materials is a good one."

I cannot tell what fed the consuming fire that made him so different from the common run of men. It has been said of him that no man was ever more faithful at any cost to the inner voice of conscience. Everything he did fell under the lash of his own self-criticism, and the praise of men

was unsatisfying and distasteful. But I cannot doubt some deep religious impulse moved him; not, I suppose, that which for others is interpreted through systems of belief and practice, but rather some craving for the perfect synthesis of thought and action which alone could satisfy his test of ultimate truth and his conception of life's purpose.

Strange how he loved the naked places of the earth, which seemed to match the austerity of life as he thought that it should be lived. And so he loved the desert where wide spaces are lost in distance, and, wanderer himself, found natural kinship with the wandering peoples of his adopted home.

His was the cry of Paracelsus:

"I am a wanderer: I remember well  
One journey, how I feared the track was missed  
So long the city I desired to reach  
Lay hid: when suddenly its spires afar  
Flashed through the circling clouds: you may conceive  
My transport: soon the vapours closed again:  
But I had seen the city: and one such glance  
No darkness could obscure."

Yet side by side with this craving to accomplish ran another strand of feeling that lifts the veil from the inner struggle which I suppose grew harder in his later years. In August, 1934, he was writing to a friend about his own disquiet: "I think it is in part because I am sorry to be dropped out. One of the sorest things in life is to come to realize that one is just not good enough. Better perhaps than some, than many almost. But I do not care for relatives, for matching myself against my kind. There is an ideal standard somewhere, and only that matters, and I cannot find it. . . ."

There we must leave it, for the waters of genius run too deep for human measure.

Lawrence himself was never free from the challenge of his nature's secret. Perhaps he came nearer to the answer during those last days when he lay in the uncharted land between life and death, and saw his life no longer in part, but whole before him. Once more, it may be, he visited the Norman castles which first in boyhood had excited his romantic sense, or walked again amid the ancient works of Palestine. Or there came back to him the vision of the endless desert, rocking in the mirage of the fierce heat of noontide, and once more he trod the dusty ways of Akaba, Azrak, and the city of the Caliphs and, last of all, his beloved Damascus, with her green gardens by the river, these fading in turn before the places of his spiritual hermitage, Henlow, Bovington, Cranwell, and the Air Force stations of India—Peshawar, Miranshah, Karachi. And before the end came, I like to think that he saw again the spires of Oxford, unearthly in their beauty, set in the misty blue of early May, until at last he reached no earthly city, but that city of his vision where he might see no longer as in a glass darkly, and know at length as he was known.

# Winter 1949 - Tributes to AC Shaw (3)

## AIRCRAFTMAN SHAW—A MEMORY

SIGHT of the Lawrence relics in the College library reminds me of my own fleeting glimpses of that most remarkable man. I first saw him in the old M Squadron dining hall at Uxbridge. In those days the big annual overseas drafts assembled there. Large numbers of men bound for India, Iraq and Egypt were caught in the turmoil of “kitting out” and otherwise preparing for five years overseas. Lawrence remained through it all, serene, reserved, having little intercourse with any but his immediate neighbours. That would be in 1926.

The usual descriptions of Lawrence are generally correct. His physique was slight, almost shadowy, and he moved and spoke quietly. He could easily have been lost in a crowd. But somehow he never was. Not that the force of his personality was immediately obvious. He was no high-pressure salesman. He had, in a large measure, the faculty of withdrawal. He could make a praiseworthy attempt to take the colours of his surroundings. He did desire, if we are to believe his own words, complete obscurity. But great as might be his power of withdrawal, and anonymous as was his physique, he could not hide his features, at least, in European clothes. The clear blue eyes could be veiled, but that cliff-like brow was still obvious beneath a “cap, S.D.”

I think Lawrence realized that he had made a mistake. Complete anonymity is not to be found in the Royal Air Force. He had shed responsibility perhaps, but he had overlooked the fact that the R.A.F. was, and, one hopes, still is, a close-knit band with common aims and abundant mutual interest. Every member of the team is a matter of great interest to a great number of people. He could have hidden himself so much more easily in Islington or Charing Cross Road. In the R.A.F. he was a walking query. He knew it and hated it. He could do nothing about it. He bore it cheerfully. Perhaps it ministered to that masochism which was in him and which largely shaped his course.

The draft sailed in the old *Derbyshire*, long since defunct. The vessel swarmed with humanity; by day the deck was a market-place—it was hard to find squatting room. But Lawrence could usually find a perch for his small frame and quietly read Pepys. Like deck space, topics of conversation were limited. The troops quickly exhausted the officers (whom they did not know) and the officers' ladies and the nursing sisters who regarded them from the distant heights of the upper deck. Lawrence was in the midst of the troops. What was he doing in the R.A.F.? Was it true that he was a spy? Why was he going to India? Was he snooping for Air Ministry? The queries arose and buzzed on the troop decks. One afternoon they were put to me by a group tight-packed against the rail. I replied that I didn't know and didn't care. There was nothing we could do, anyway. Lawrence's business was his own. He obviously wanted to be left alone; the best and kindest thing would be to leave him so. I noted the expressions of my companions. Turning, I saw Lawrence. Clearly, he had heard. He grinned rather boyishly and walked away.

Thereafter he and I met several times on deck in the cool of the morning before the swarm arose. We chatted, but I do not recall that we said anything significant. He disliked “Helmets Wolseley, N.P.” and thought them ridiculously unnecessary. “I travelled thousands of miles up and down the coast,” he said once, indicating the red-burnt desolation of Arabia, “and I never wore one. I let my hair grow long down the back of my neck.” But mostly I think we preferred to be silent.

The last time I saw him was in the Union Jack Club a year before he died. He sat behind a newspaper in the reading room. He lowered the paper and I saw his features fully. He had matured. He had developed eyebrows at the base of that great brow. His nose and chin were more set. The likeness to George Bernard Shaw was startling. We half grinned and I passed on.

No doubt had I been a little less reserved with him, my memories of Lawrence might have been more valuable. But on the whole I am glad that I did not hammer on his shell.

A. W. H. M.

# March 1951 - Harry Lager MBE Head Clerk

JOURNAL OF THE ROYAL AIR FORCE COLLEGE

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## HARRY LAGER

THE retirement of Mr. J. H. S. Lager, M.B.E., will cause much regret not only at Cranwell but throughout the Royal Air Force. He has been at the College since its foundation, and during that time he proudly claims to have met and known more people in the Service than any other individual.

Born in Leicestershire, Mr. Lager was educated at Ashby de la Zouch Grammar School. He served in the Royal Naval Air Service and the Royal Air Force during the 1914-18 war, and was transferred to Cranwell from the Royal Naval Air Station, Eastchurch, in February, 1920, to assist in starting the College. This post was Head Clerk.

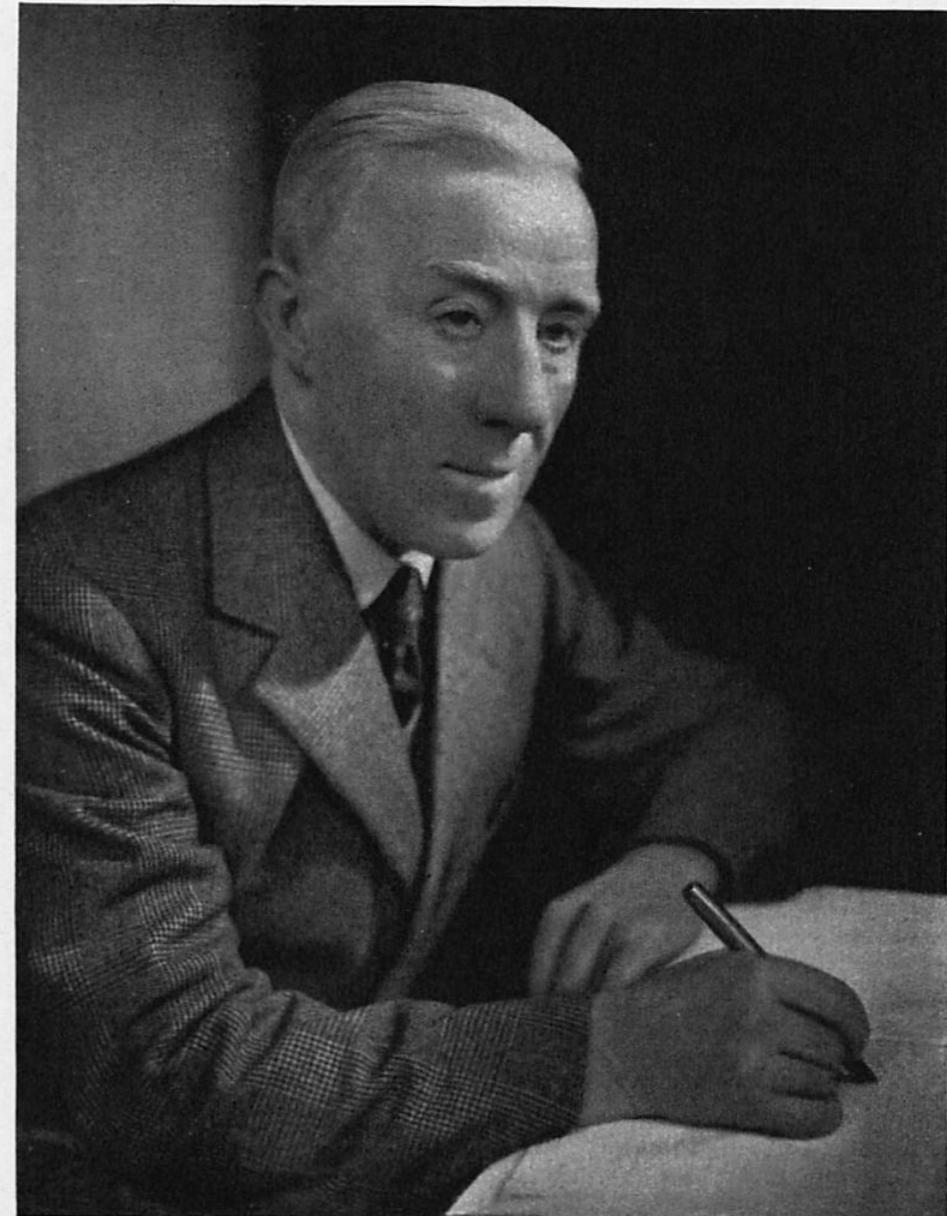
Mr. Lager recalls how surprised he was when he first arrived at the strange mixture of naval monkey jackets, flannel trousers and other forms of dress worn by the first cadets, who included lieutenants, "snotties," Army captains and boys straight from school. All were given the opportunity to return to their units after a year at Cranwell if they did not want to stay. The course lasted two years, with two terms in each year.

Many changes have taken place at Cranwell since those days, and Mr. Lager has seen them all. In November, 1927, he became College Accountant, and except for the years 1939 to 1947 has held the post ever since. Even during the war he was still at Cranwell, as Station Accountant Officer. In 1945, although the College was actually closed, a reunion was held to celebrate its silver jubilee, and Mr. Lager had the honour of presenting the civilian staff to the King. When the College was reopened in 1947 the present cadets' banking system was set up under his management. In the New Year Honours List for 1948 he was awarded the M.B.E. in recognition of his services.

Apart from his professional duties, Mr. Lager has taken a prominent part in many sides of Cranwell life. He was Secretary of the College Beagles and, after the Riding School was set up, of the Hunt Club. Until the war broke out he was Business Manager of the College JOURNAL and Treasurer of the Band. His activities also include the Sleaford Branch of the Royal Air Force Association and the Cranwell Shooting Club. He has also been secretary of local badminton and croquet clubs, and between 1928 and 1939 he used to organize annual boxing tournaments in Sleaford which raised over £2,000 for R.A.F. charities. He is Honorary Secretary of the Old Cranwellian Association, which has over six hundred members, and intends to keep this on after retirement. He has also found time to marry and to bring up a son.

On being interviewed, Mr. Lager admitted that he knew plenty of good stories about Cranwell, but said that most of the characters in them were now Very Senior Officers and so he was not going to have them published in the JOURNAL. He did, however, mention a certain steam-roller which somehow became mixed up in a Graduation Ball in the Old College. Among his records he has the accounts of the first entries. Before the war cadets used to sign for pocket money as they needed it, and every separate item had to be entered in the ledgers. The very first pay was drawn on 5th February, 1920, and beside each cadet's name can be seen the amount he spent on cakes and cigarettes at break. Mr. Lager also has a photograph signed by the crew of one of the many long-distance flights he has seen leaving Cranwell.

When asked if his bank had ever been raided, Mr. Lager said that one night all the windows were broken, but it turned out later to be the result of a guest night in the Officers' Mess. Another time he was coming from Sleaford with £1,000 in cash from the bank when the motor-cycle he was using broke down. Fortunately, although it was a lonely stretch of road, he got help and was able to arrive safely. The Assistant Commandant asked him later what he would have done had someone attacked him for the money. "Gone fifty-fifty," he replied. "Yes, so should I," agreed the Assistant Commandant.



[Photo: Peggy Salter Studio, Sleaford]

J. H. S. LAGER, ESQ., M.B.E.

It is obvious that Mr. Lager has very little spare time, but when he has he says he likes to sit in a pub with a pint of beer now and again. He has no definite plans for his retirement, but is certain to find something to keep him busy. He asked to be quoted as saying that he has enjoyed every minute of his time at Cranwell and would not have missed any of it. He has known every cadet who has passed through the College, and he says that the present-day cadets have not changed a bit from those of earlier years.

The College deeply appreciates all that Mr. Lager has done for it, and acknowledges its debt to him. May he have the best of luck for many years to come.

R. H. R.

# June 1951 - Obituary Sir James West (1)

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*JOURNAL OF THE ROYAL AIR FORCE COLLEGE*

## SIR JAMES WEST

SIR JAMES WEST, O.B.E., F.R.I.B.A., the architect and designer of the College, died at his home in Devon on 15th June at the age of 66.

He was educated at Cardiff High School, and entered the Office of Works in 1904. His great work on the design of the College fell into the late nineteen-twenties; the foundation stone was laid in 1929 and the building was opened in 1934. The designer was made an O.B.E. in 1930. In the year of the opening of the College he was knighted and became chief architect to the Office of Works as he was later of the Ministry of Works and Planning. He retired in 1945.

Sir James West's other works include the Royal Courts of Justice at Belfast, the Ministry of Pensions Offices at Acton and the Consulate General at Alexandria. He designed the Annexe to Westminster Abbey erected for the Coronation of Their Majesties King George VI and Queen Elizabeth. But few will doubt that it is as the designer of the Royal Air Force College at Cranwell that he will be best remembered.

We quote from the obituary notice in *The Times* the following personal appreciation:

"Utterly devoted to his manifold tasks, he spent his strength upon them almost to breaking point. Although so much of his energy had to be given to the work of administration and supervision, he was a gifted and enthusiastic designer who never slipped into the danger of automatic repetition which is the constant enemy of the official who has perhaps more on his hands than one man can fairly undertake. He gave the fullest credit and publicity to the able men who worked under him and insisted on their names being publicly associated with the buildings for which they had a large share of responsibility. A man of attractive personality, his earnest sincerity secured the friendship of those with whom he came into contact, and he was sincerely respected by his colleagues inside and outside the official world."

# March 1956 - Obituary and Tribute to Our Founder (2a)

## “Nosce Te Ipsum”

(Know Thyself)

*The motto of Marshal of the Royal Air Force the Right Honourable Sir Hugh Montague Trenchard, G.C.B., O.M., G.C.V.O., D.S.O., first Viscount Trenchard and Baron Trenchard, of Wolfeton, in the County of Dorset, in the Peerage of the United Kingdom, Baronet*

‘This we learned from famous men,  
Knowing not we learned it,  
Only as the years went by—  
Lonely, as the years went by—  
Far from help as years went by—  
Plainer we discerned it.’

(RUDYARD KIPLING—*Let us now praise famous men.*)

IN so far as any Service academy can be said to have an individual founder, Lord Trenchard was the founder of the College. In Command Paper 467 of December, 1919, at the outset of his record ten-year occupation of the appointment of Chief of the Air Staff, Lord Trenchard set out his plan for the development of the peace-time Service. With typical clarity of vision and disregard of purely political considerations he decided that what little money could be obtained for the Royal Air Force should be spent, not on the shop-window of more squadrons equipped with obsolescent aircraft and supposedly operational, but on the sure foundation of good training. In the course of the paper he said: ‘We now come to that on which the whole future of the Royal Air Force depends, namely, the training of its officers and men.’ He planned therefore, first, a Cadet College; then the school of technical training which was to be Halton; and, finally, a Staff College. In founding these he carried his case against those who on grounds of false economy hoped that the leaders of the new air service could be raised by the old land and sea service academies.

The Command Paper continued: ‘The channels of entry for permanently commissioned officers will be through the Cadet College, from the universities and from the ranks. The Cadet College will be the main channel. . . . The course will last two years, during which the cadets will be given a thorough grounding in the theoretical and practical sides of their profession, and in addition learn to fly the approved training machine. . . . The College will open at Cranwell in Lincolnshire early next year.’

It is often recounted that this particular site was chosen personally by Lord Trenchard because of its suitability as a training airfield and because of its comparative remoteness from urban distractions.

Lord Trenchard himself wrote the Foreword to the first issue of *The Journal* dated September, 1920. He wrote:

‘This is the first number of the ROYAL AIR FORCE CADET MAGAZINE, and I would like to write a few words.

‘I hope this magazine will live and prosper, and be a great help in forming and guiding the destinies of this College.

‘It was decided to form this Cadet College because it was realized from the first that such a College was the essential foundation of a separate Air Service. This College, in

conjunction with the School of Technical Training for Boys at Halton, will have the making or marring of the future of this great Service, which was built up during the war by all the gallant Pilots and Observers and other ranks who fought through it, and won a name in the air second to none in the world. It always held, and finally conquered completely, the German Air Service. If it is to continue its great work, which I am convinced we all intend that it shall do, we all realize that it has to live up to its war reputation, and we must ensure by every means in our power that it does so.

‘We have to learn by experience how to organize and administer a great Service, both in peace and war, and you, who are at present at the College in its first year, will, in future, be at the helm. Therefore you will have to work your hardest, both as Cadets at the College and subsequently as officers, in order to be capable of guiding this great Service through its early days, and maintaining its traditions and efficiency in the years to come.’

From the outset Lord Trenchard took a close and direct interest in his foundation; he was a frequent informal visitor and acted as Reviewing Officer at passing-out parades both before and after his relinquishment of the post of Chief of the Air Staff. His first formal visit in this role was with the Secretary of State for War and Air, then Mr Winston Churchill, at the first inspection of the College on 20th December, 1920. (It is interesting to note that in his report at this inspection the Commandant was even then commenting on ‘The difficulty of fitting flying training into an already overcrowded syllabus.’) His last appearance in this role was on 27th July, 1949, at the passing out of No. 47 Entry.



Lord Trenchard, with Group Captain R. C. Keary, in July 1953, shortly before he planted a commemorative tree

But Lord Trenchard delighted even more in his frequent informal visits to Cranwell and he was present at all the great occasions in the history of the College. His first visit of all took place on 23rd March, 1920, when he accompanied Prince Albert, later His Majesty King George VI, on an inspection of the new College. He was present at the opening of the main College building by the then Prince of Wales; at the 25th anniversary of the College in 1945; at the presentation of the Colour in 1948. His last appearance at Cranwell was in July, 1953, when His Royal Highness the Duke of Edinburgh visited the College and acted as Reviewing Officer at the passing-out parade of No. 59 Entry. After the departure of His Royal Highness, in a simple ceremony Lord Trenchard performed what was to be his last formal act here; he planted a commemorative tree in the south-west avenue. But he had planted more than trees at Cranwell.

Lord Trenchard founded the College; built it up as a training ground of leaders; fought for the complete realization of his

# March 1956 - Tribute to Our Founder (2b)

vision, insisting both on the wide scope of the curriculum and on the proper surroundings in which this course would be followed, against the twin enemies of apathy and parsimony. His foresight and his almost intuitive appreciation of the trends of air warfare, coupled with his unique powers of command, his inspiring leadership and his wise choice of men to carry out his policies, enabled Cranwell to send forth that small nucleus of officers round which the Service could expand to save their country and the world.

Mention must be made of his close interest in College sport, especially rugby football. His own sporting interests centred on the horse but he regarded rugger as the most character-forming of games. Great was his delight in 1928 when the College first beat both Woolwich and Sandhurst at rugger. He and Lady Trenchard (she usually was his most welcome companion on his visits to the College) presented a cup to commemorate this occasion which is treasured with the College silver. The way in which his personality was impressed on every aspect of the College life was well represented by the simple rune that was the first unofficial motto of the College:

‘You work hard;  
You play hard;  
Hugh Trenchard.’

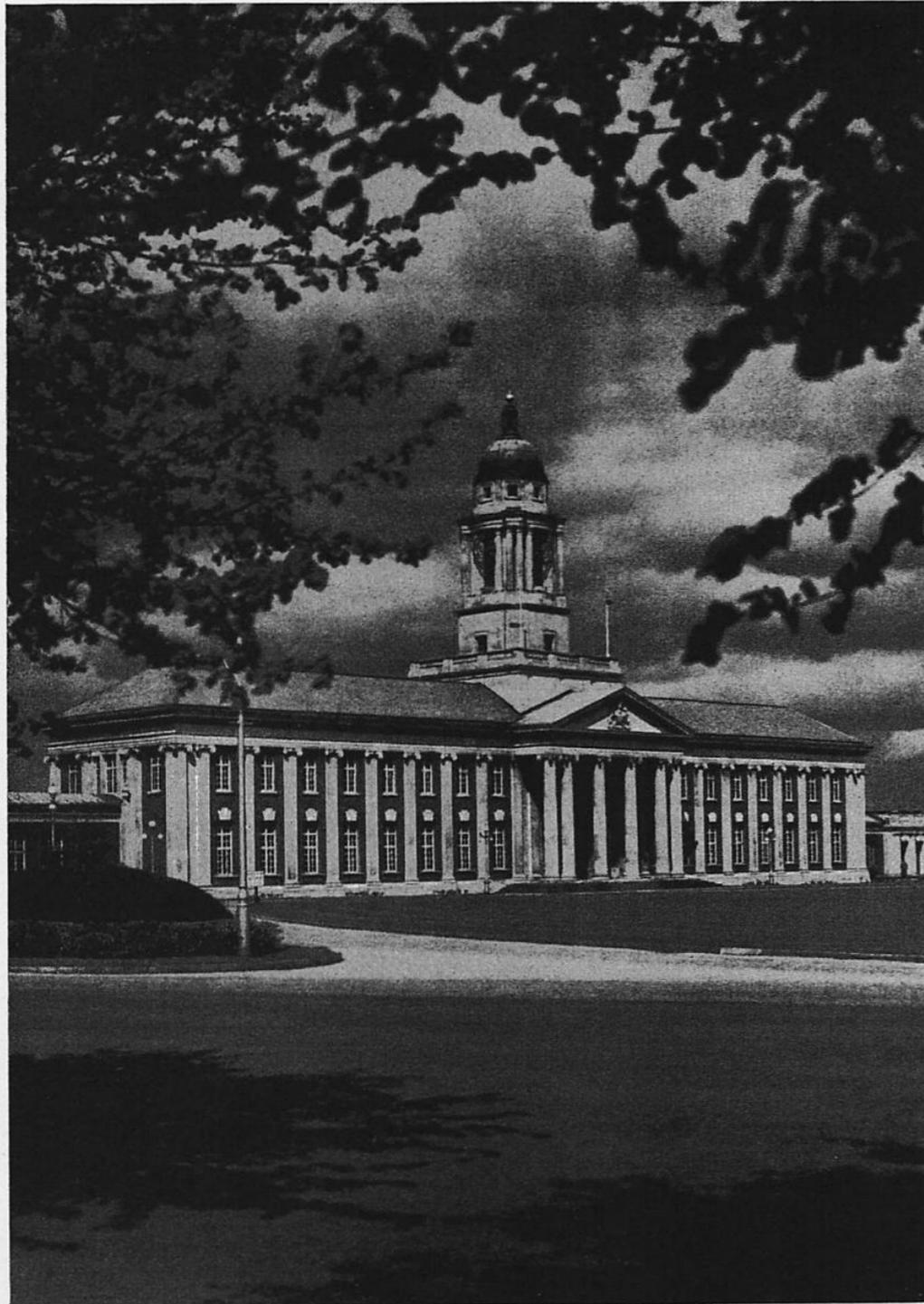
What of Lord Trenchard the legend? Legends are carried by word of mouth—not in print. They live in the fund of memory and anecdote that illustrate the many facets that make up the full personality of a man with the force to change history. This many-sidedness was well illustrated when the writer passed on the news of Lord Trenchard’s death. The first person informed was a civilian chargehand, a retired Warrant Officer. He recalled ‘the Major’ as a fair but fearsome Assistant Commandant at the C.F.S. at Upavon in 1913 whose ‘Boom’ on one occasion caused an overawed orderly to faint. The second person he informed was his wife; she recalled Lord Trenchard’s kindness and courtesy to a young guest at the Hendon Air Displays of the middle thirties. Such a list could be continued indefinitely. Round the truly great there accumulate these revealing glimpses of the individual aspects that constitute the complete character of an original thinker and an outstanding leader.

The College contains many lasting memorials of its founder. Pride of place in the entrance hall is given to the noble portrait by Verpillieux (which we reproduce elsewhere); this was presented to the College in 1936 by the Old Cranwellian Association. The Trenchard Cup for Service Training is awarded to the squadron with the highest position in the final order of merit. On our shelves rests part of his library made over to our safe-keeping. Above all it has the memories of his personality and his example. He concluded his last address to the assembled College with the words: ‘Believe in yourselves; believe in the Service. Each one of you must do his utmost in his particular job and make that efficient. Without that you can do nothing, with that you can do anything.’ He pointed the way; he fulfilled his motto; he knew himself.

Those in their seventies and eighties still speak of their vivid sense of seeing the end of an era when Queen Victoria died. The death of Lord Trenchard, too, marks the end of an epoch—the first heroic age of air power. The vast development of air power in this period largely stems from his clarity and force.

J.F.P.

# March 1958 - Obituary Sir Charles Longcroft (3)



'Clouds over the College'

## OBITUARY

Air Vice-Marshal

### SIR CHARLES LONGCROFT

K.C.B., C.M.G., D.S.O., A.F.C.

*First Commandant of the Royal Air Force College*

AN inspiring connection with the heroic days of the founding of the College has been broken by the death at the age of 74 of Air Vice-Marshal Sir Charles Longcroft, K.C.B., C.M.G., D.S.O., A.F.C., the first Commandant of the Royal Air Force College. Sir Charles Longcroft's continuing interest in the affairs of the College throughout his later service and retirement was exemplified by his work for the Old Cranwellian Association of which he was President from its inception. The College offers its sympathy to Lady Longcroft in her great loss.

After an education at Charterhouse and Sandhurst, Second-Lieutenant Longcroft was commissioned in the Welch Regiment in 1903 at the age of 20. Nine years later he learnt to fly, his Royal Aero Club certificate being No. 192, and joined the Royal Flying Corps. In 1913 he was awarded the Britannia Challenge Trophy for the most outstanding feat of aviation during the year in flying non-stop from Montrose to Farnborough via Portsmouth in a B.E., with a 70 h.p. Renault engine, in seven hours and 20 minutes.

At the outset of the war Major Longcroft went to France with No. 2 Squadron, and one of his early reconnaissances first disclosed German forces on the move near Louvain. He was soon given the command of No. 4 Squadron and took part with other squadrons of No. 3 Wing in the battle of Neuve Chapelle and Aubers Ridge. The serious shortage of pilots led to his recall and gave Lieutenant-Colonel Longcroft his first real experience in the organization of flying training at the Central Flying School. By 1916 he was back in France in command of No. 2 (Corps) Wing and played his part during this period of tough, aggressive fighting in instilling the bold, offensive spirit in the new air service which was to be its hall-mark. By 1918 Major-General Longcroft was in charge of the Training Division and setting another Service tradition by visiting his units in a single-seater Camel. At the end of 1919, as an Air Commodore in the new Royal Air Force, he took over the command of Cranwell.

Selected by Air Marshal Trenchard for the crucial task of building up from scratch the new College, it goes without saying that he was ideally suited for the task and threw himself heart and soul into it. The first Professor of English at the College might not be expected to look back on his short stay at Cranwell with much affection, but in his autobiography Mr S. P. B. Mais speaks of a 'Commandant who appeared to be obsessed by three passions, hunting, flying and Cranwell. He took me over the station with much the same air of eagerness that a motor enthusiast might display when showing you his car.' The College opened on Thursday, 5th February 1920, and in its first year the impress of this great man set the College in a mould which it has never lost. All those—officers, flight cadets, airmen and apprentices—who served at Cranwell with him speak with love more than mere respect of his humanity coupled with strictness, his high personal standards, his fine appearance, his real interest in their welfare, and his drive and enthusiasm. They remember him as a leading figure hunting and beagling, outstanding at tennis and squash, playing cricket with the local farmers and soccer with the n.c.os; but above all they remember the manner in which he did things, the grand manner for the formal occasion, the easy, warm manner for personal meetings.

At the end of its first year the College was inspected by the Secretary of State for War, the Right Honourable Winston Churchill, M.P. The whole station paraded and marched past, and then the Secretary of State saw the flight cadets at work. In his report on the College, given in the gymnasium, the Commandant spoke of the founding of the Squadron system and of the place of flying at



Cranwell. 'While an officer who cannot fly is useless to the Royal Air Force yet the mere ability to fly by no means qualifies an individual to become an officer in the Royal Air Force. In fact it is scarcely too much to say that flying in the Royal Air Force is now and will more and more assume the same relative importance to other branches of technical knowledge as riding does in the cavalry and marching in the infantry.' The principal problems which the Commandant had found also had a familiar ring to them; the wide diversity of subjects, the lack of traditions, and 'the difficulty of fitting flying training into an already overcrowded syllabus.' After 3½ years as Commandant of the College he left for an Air Ministry appointment, followed by command of the Inland Area before his retirement in 1929.

In a long obituary *The Times* said of Air Marshal Longcroft's period at Cranwell that it was one 'of great importance as the College was new and in the process of justifying itself. . . . That Cranwell has proved a brilliant success is due in very great measure to the officer who commanded it during those critical early years.'

Cranwell was fortunate to have an officer of this quality to set it on its road; and it seems that he was satisfied with its progress. On his penultimate visit to the College he was interviewed with the then Commandant, Air Commodore H. Eeles, in a recorded programme for the overseas service of the B.B.C. The idea of the programme was Cranwell in 1920 compared with Cranwell in 1955. After commenting on some of the physical changes he could see while watching a cricket match on the Orange, Sir Charles concluded:

'But none of this matters, what matters is the spirit is still the same.'

# January 1968 - Obituary Sir George Beamish (4)

## AIR MARSHAL SIR GEORGE BEAMISH

The Journal reports with deep regret the death at his home, in Castlerock, Northern Ireland, on 13th November 1967 of one of our most distinguished and well-loved Old Cranwellians, Air Marshal Sir George Robert Beamish, K.C.B., C.B.E., at the age of 62.

An outstanding flight cadet, George Beamish was awarded the Sword of Honour at the passing out parade in December 1924. A quarter of a century later, in 1949, he was to return to the College as the second Old Cranwellian to become Commandant, an appointment in which he was especially happy since he so enjoyed the company of the younger generation.

The war brought his first command: the R.A.F. in Crete in 1941. Other posts during the war included Senior Air Staff Officer in the Desert Air Force, Senior Air Staff Officer in No 1 Tactical Air Force and Air Officer Commanding No 44 Group. After the war he became president of the R.A.F. Selection Board, then Director of Weapons at Air Ministry before returning as Commandant to Cranwell. Later he served as Air Officer Commanding, Iraq, and then as Director-General of Personnel back at the Air Ministry. He became Air Officer Commanding-in-Chief, Transport Command in 1954; his final appointment before retirement in 1958 being as Air Officer Commanding -in-Chief, Technical Training Command.

With his three Royal Air Force brothers the Air Marshal had a considerable reputation as an all-round sportsman. As a flight cadet, he represented the College at soccer, cricket, hockey and athletics, besides captaining the rugby XV. He won the R.A.F. Golf Championship in 1925 and the R.A.F. heavyweight boxing championship in 1929. But the rugby field brought him his greatest sporting success, including 26 caps for Ireland and the captaincy on several occasions.

He was a founder-member and mainspring of the Old Cranwellian Association, serving on the first committee, and until his retirement keeping in close touch with its affairs. Since 1958 he had lived quietly in Ireland, and, although recently he had been somewhat unwell, his death was entirely unexpected.

He will be sadly missed by his many friends and all those who served with him for, in spite of his formidable and impressive size he was basically a modest, rather shy and very approachable person.

We extend our deepest sympathy to his relatives.

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*The following letter to the Editor was received from an old friend of Air Marshal Sir George Beamish.*

The Editor,  
Royal Air Force College Journal,  
Cranwell,  
Lincs.

Dear Sir,

The sad news of the death of Air Marshal Sir George Beamish will no doubt bring many tributes to his memory and I expect you will be writing something yourself for the next issue of the College Journal. Accordingly, you might like to have a few notes about him from one who knew him throughout his Service career.

I joined the College as a Flying Instructor when he was an Under Officer and, later, came to know him more intimately when, in 1930, we worked together on the Officers' Engineering Course at Henlow and, afterwards, did a short tour there as "E" Officers. A firm friendship developed then and endured throughout the subsequent years, during which time I was often privileged to be his confidant in many matters affecting his Service and his private life.

No words of mine are needed to enlarge upon his well known prowess in sport. Suffice it to say that his early distinctions as a heavyweight boxer and a rigger forward extended to virtually every British sport, in which he not merely participated but excelled. This ability was the keynote of his character. Whatever he undertook he did it with utter dedication and with all the physical and mental powers at his command.

# 1971 - Obituary Sir Arthur Longmore (5)

## **AIR CHIEF MARSHAL SIR ARTHUR LONGMORE, GCB, DSO**

*A tribute by Air Chief Marshal Sir Wallace Kyle, GCB, CBE, DSO, DFC, RAF Retd, at the Memorial Service for Air Chief Marshal Sir Arthur Longmore, GCB, DSO, held at the Royal Air Force Church of St Clement Danes in the Strand on Wednesday, 27 January 1971.*

'Most of us will have our special and personal memories of Arthur Longmore, the great gentleman we knew ; and we will cherish them. But all of us are here today to honour his memory and pay tribute to his contribution to his country ; and especially to the Royal Air Force. For he was one of the early pioneers of military aviation ; one of the first four Naval officers to be chosen for flying duties ; and as early as 1911 he qualified as a pilot and was awarded the Royal Aero Club certificate. And many of us, some who were witness to events at the time, will think with admiration of him and those other gay adventurers who learnt to fly in those early days, partly for the fun of it, but also to find out in practice the possibilities of military operations in the air. They made light of the constant hazards and the unreliable equipment ; and frequently risked their all in meeting this challenge.

Significantly, and ever since to our great advantage, their enthusiasm and courage were infectious and have remained a stimulant and a bond for all of us who, throughout the years, became involved in military aviation. He often talked of this, and set much store by it. But Arthur Longmore was not a visionary ; nor was he a man whom we associate with some great dramatic, or particularly vital, event in our affairs. Rather was he a man who charted his course and made his decisions instinctively, though with sure judgment. And it was this characteristic which determined his actions and made him recognise the need to explore all the possibilities of the new environment for military purposes ; so that we would be ready to exploit to the full the technical advances which he knew would come. And it was this characteristic, too, which influenced him to join with those who recognised that military flying must be allowed to develop independently, untrammelled by traditionalism and prejudice. And so he was, in truth, one of the early founders of the Royal Air Force. And we will always remember him with pride and affection, for the part he played in the formation of this Service of ours, and with admiration, for the contribution he made to its success.

I first met Arthur Longmore when he was Commandant at Cranwell in 1929. I was a cadet, occupied well enough with day to day problems and events, but lonely, sometimes, as my home was in Australia. It was then that I had first-hand knowledge of his kindness and his understanding ; for he recognised my need and sometimes took me to his home where I enjoyed the warm friendliness of his family.

I know that I am but one of the many who will always be grateful for his understanding and perception, particularly at that early time in our careers. For we became aware that here was a man, a very senior officer, who could adapt himself to our immature ways and gain our confidence and our complete respect. As a sportsman and a games player he was well endowed ; a keen and experienced yachtsman and a member of the Royal Yacht Squadron ; an accomplished horseman, and also with a natural aptitude for most ball-games. This is known well enough and not of itself particularly unusual or significant, but he used those skills not only for his own pleasure, but effectively as a means of getting to know his officers and men and establishing common ground with them. This was significant. And when age started to reduce his personal prowess, he delighted in teaching and passing on his experience to younger folk whenever the chance came. And so it is not surprising that he held most of the important command appointments both in operations and training. Nor is it surprising that he was admired for the way he carried his own responsibilities, sometimes with far less than his proper share of support ; or that he was held in great affection by the officers and airmen who came to know him for his understanding, not only of his own job, but of their problems. And so it continued throughout his life. After he retired from active service, he retained his intense interest in Air Force affairs and especially in those who were still serving.

More than ten years after he retired, he continued to give his service as he took on the job of vice-chairman of the Imperial War Graves Commission, and fostered its work as actively as anything he'd done before. And now, as we pay our tribute to him, we extend to his wife and his family our deepest sympathy. But we also applaud with them his great contribution to his fellow men, his Service, and his Country ; made willingly and with so much dignity. For this indeed was the measure of this gallant gentleman.'

# 1977 - Obituary Sir Andrew Humphrey (6a)



Marshal of the Royal Air Force Sir Andrew Humphrey GCB OBE DFC AFC

## TRIBUTE TO A GREAT AIRMAN

**MARSHAL OF THE ROYAL FORCE SIR ANDREW HUMPHREY, GCB, OBE, DFC, AFC, CHIEF OF THE AIR STAFF 1 APRIL 1974 to 6 AUGUST 1976 — CHIEF OF THE DEFENCE STAFF 24 OCTOBER 1976 to 24 JANUARY 1977**

It was with shock and great sadness that the Royal Air Force College heard the news of the untimely death on 24 January 1977 of Marshal of the Royal Air Force Sir Andrew Humphrey. The hearts of everyone at Cranwell, staff, students and families, went out immediately in deep and sincere sympathy to Lady Humphrey.

Sir Andrew was one of the College's most respected and distinguished graduates. He was the first ex-Flight Cadet to become Chief of the Defence Staff and we were — and are — very proud of him. It was a cruel tragedy and a serious blow to national defence when he was struck down after such a short time in post, just when he had begun deploying his remarkable qualities of leadership and many talents at the pinnacle of the military profession in our country.

We at the College recall with the greatest pleasure the many visits to Cranwell by Sir Andrew and Lady Humphrey during his time as Chief of the Air Staff. We take some slight consolation in recalling that we dined them both out in College Hall in July 1976, just four weeks before Sir Andrew handed over the Air Force to his successor. And we are pleased that on that occasion we gave them ample evidence of the warmth of our regard for them both.

The *Journal* feels that it can do no better as a tribute to a great airman than to place on permanent record, verbatim in our columns, the *Times* obituary by Marshal of the Royal Air Force Sir John Grandy, and the Memorial Address by Marshal of the Royal Air Force Lord Elworthy in Westminster Abbey.

**Marshal of the Royal Air Force Sir John Grandy, Governor of Gibraltar writes :**

Marshal of the Royal Air Force Sir John Grandy, Governor of Gibraltar writes :

The death of Marshal of the Royal Air Force Sir Andrew Humphrey at the early age of 56 is a tragedy of far reaching consequence. After thirty-eight years of diverse experience and responsibility in the Royal Air Force culminating in two years as Chief of the Air Staff, he had been Chief of the Defence Staff for only three months.

A member of his pre-war cadet entry at Cranwell has said of him how apparent even then were the human qualities that were to be found in the public figure he later became : his modesty, his consideration for others, his sensitivity and his warmth. He fought in the Battle of Britain and later served in a wide variety of flying and staff appointments during and after the war. He was Senior Instructor at the Royal Air Force Flying College between 1953 and 1955, and he is remembered by his students as a resolute, tough instructor and one always reluctant even in the small hours to abandon a discussion on flying and operational problems. His acknowledged skill as a pilot provided many 'firsts' at Manby. He captained Canberra Aries IV on its record-breaking flight from Capetown to London, and later took the same aircraft on the first flight by a British jet over the North Pole. For these flights he was awarded a second bar to his AFC. Less well known, but still very significant for the Service, was his work in the Operational

# 1977 - Obituary Sir Andrew Humphrey (6b)

Requirements branch to ensure that the prototype Lightning became a successful front-line fighter aircraft. He insisted on testing and refining his ideas in the air in what was for those days an exceptionally advanced aircraft. For this outstanding work he was made a CB whilst still a Group Captain, an honour of rare exception in the Service.

Andrew Humphrey next commanded the very busy airfield at Akrotiri while it was being developed from virtually a tented camp to the huge permanent base it later became. Following this he served as the Royal Air Force Director of Defence Plans, during what was to be a very difficult period. By now there was no doubt among his contemporaries that he was a future CAS, an opinion that was confirmed later during his tenure as the last AOC Middle East. In this post he was intimately concerned in the withdrawal from Aden, particularly the crucial air transport aspects of it which are still generally regarded as something of a model.

After innovative years first as AMP and then as AOC in C Strike Command, he was appointed CAS in 1974. By now he had developed a deep concern about the increased build-up of Soviet Forces and our ability to defend ourselves, and he said so. He said so at moments that not everyone found convenient, and he said so at times when silence would not have been criticised. But these strong views were not an obsessive focus; his perspective took in the complex patterns of modern history, and it extended forward to explore the trends that he believed his Service should prepare itself to meet. In that sense he was a strategist; but he was not a dogmatic one. He had such an obvious willingness to listen that even the most junior of his colleagues found him receptive to their ideas. An encounter of that kind usually led to a rapid and penetrating analysis but it was never crushing, it was always constructive and above all it was delivered quietly and with immense charm. He encouraged, exercised, and — in the very widest sense of that word — educated those who were fortunate enough to serve close to him.

Always a very active man, Andrew's very close interest in the Royal Air Force Athletics Association kept him in touch with the sport he had loved since Cranwell days, and in the nine years of his presidency the Royal Air Force team never lost the Inter-Services Championships.

He travelled a great deal and made it a point of honour to be seen around his Service as often as he could manage. In his short time as CDS he showed the same approach and it was just after such a visit, that he was taken ill three weeks ago.

I said that his loss is tragic, and so it is. He would have brought to the onerous post of CDS the wisdom, knowledge and experience that stem from long service and great responsibility. He was eminently fitted for the role, not only because of his background, but far more than that, he had a tenacious and penetrating mind and he had a comprehensive grasp and an inter-Service understanding of the immense problems facing those responsible for our defence policy today. Those who guide defence in Whitehall have suffered the loss of an incisive and inspiring intellect that neither Services, Government nor country can afford. Even in a Service that has never found itself short of talent it has been rare to find in one man such skill in the air, so powerful an intellect and so warm a human being.

The hearts of countless Service men and women and their families at all levels go out to his widow, Agnes, herself a former Women's Auxiliary Air Force officer, who, in whatever appointment her husband was filling at home or abroad, endeared herself to all through her unremitting efforts to improve the welfare needs of Service personnel and their families. Theirs was a partnership devoted to the Royal Air Force. The contribution made by Andrew Humphrey to his country, to its defence and to the Service he so loved, was outstanding. He was unquestionably a great airman.

## Marshal of the Royal Air Force Lord Elworthy's address in Westminster Abbey :

Andrew Henry Humphrey was born in January 1921. A few days after his 56th birthday, when a Marshal of the Royal Air Force and the newly appointed Chief of the Defence Staff, he died. We are here today in Westminster Abbey to give thanks for his life, work and inspiration. There is so very much for which to be thankful.

I am greatly privileged to have been asked to give this address. Though I could not help knowing of him, I did not know Andrew until some fourteen years ago and in attempting now to do some justice to his memory, I am indebted to many people who knew him well, saw his work and have written or spoken about him to me.

The young Andrew was fascinated by aircraft even in early Prep. School days and long before he left his Public School — Bradfield — he had decided upon a Royal Air Force career.

He passed out of Cranwell and was awarded his Wings in April 1940. In September, after a ten day conversion course on Spitfires, he was in action against the enemy, but he was soon switched into the then almost unknown business of night fighting. It was at this time that Andrew Humphrey began to reveal his truly remarkable potential as an aviator. It is impossible to talk about him without constantly returning to the subject of flying. As the years went by and as a result of his exceptional natural ability coupled with his determination, courage and his meticulous preparation for the task in hand, he acquired an ever increasing reputation as a pilot of the very highest calibre. He never lost his love of flying, he never lost his skill. Even in later years when he was no longer in flying appointments, he flew whenever it was humanly possible and remained to the end a master of the art.

But to go back to 1941, he was that year awarded the DFC for his destruction of enemy bombers at night and then, when posted as an instructor to a night fighter OTU, so outstanding was his performance that he was awarded the AFC. His instructional duties were interspersed with further operations and his tally of enemy aircraft destroyed increased. In 1943 he was posted to North Africa, happily for the efficiency of the rocket-firing Beaufighter and Hurricane squadrons there, again as an instructor. A bar to his AFC gives some indication of what he achieved. For the last year of the war and the first few after it Andrew served in India, the Far East, at home and in the Middle East and East Africa, mostly on flying duties.

In 1951 he was posted to Manby for the Advanced Flying College Course. To nobody's surprise he was the outstanding student and at the end of the course was promptly posted to the staff, first as a syndicate leader and then as senior instructor. For his work at Manby, which included two record breaking flights, the first from Capetown to London and the second over the North Geographic Pole, he was awarded a second bar to his AFC.

After the Staff College — even there he somehow managed to log 50 flying hours — and then a very distinguished tour of duty as Deputy Director of Operational Requirements at the Air Ministry, he went to Cyprus to command Akrotiri and it was there that I first knew him and where, even as a visitor, I could not fail to be impressed by a commander of quite exceptional ability. On promotion to Air Commodore Andrew went to the Imperial Defence College and from there to the very testing post of Director of Joint Plans at the Air Ministry which then became Director of Defence Plans (Air) at the newly constituted Ministry of Defence. I was at this time Chief of the Air Staff and we worked very closely together. With a major Defence Review in progress, the Services were going through difficult times and the Chiefs of Staff and

# 1977 - Obituary Sir Andrew Humphrey (6c)

the Planning Staff were deeply involved in controversial issues some of which raised inter-Service tensions particularly between the Navy and the Air Force. Andrew proved himself a superb staff officer. He got through prodigies of work, all of it meticulously prepared and reasoned, and he debated fearlessly but fairly.

In 1965 he was posted to Aden as Air Officer Commanding, Middle East. Just before he went, the newly appointed Unified Commander in Chief, Middle East, who was to be his boss there, asked me whether I really thought that an Air Force Officer who had been so involved in inter-Service controversy, was the right man to send to a Unified Command, faced with a task that would demand the utmost in terms of inter-Service agreement. I assured him that the Air Force was giving him the best man it possessed. It is unlikely that his doubts were then dispelled, but two years later he wrote me a letter from which I quote. "Humphrey brought to the joint deliberations of the Command a freshness of outlook, a flexibility of mind and a maturity of judgement which were quite invaluable. He has more than proved himself in this exacting appointment and I would set no limit on his potential as a holder of the highest post in the Air Force, or indeed in the Defence Services at large." Those were prophetic words! Ironically that Unified Commander in Chief was that great sailor Mike Le Fanu. Within the space of seven years, here in Westminster Abbey, we have mourned the untimely loss of two outstanding military men: Admiral of the Fleet Sir Michael Le Fanu and Marshal of the Royal Air Force Sir Andrew Humphrey, both appointed to the highest military post in the realm, the first denied it by illness and subsequent death and the second to die after only three months in office.

In Aden at the same time, as the last High Commissioner in South Arabia, was Sir Humphrey Trevelyan, now Lord Trevelyan, who was reading the Lesson a few minutes ago. His was the prime responsibility for what in a recent letter to me he described as that "virtually impossible Aden operation made possible by two great men who died at the height of their powers". Speaking of Andrew, he went on to say "He had a brilliant and incisive mind and was a wonderful person to work with in difficult days. And he was a warm person. When he met, his face would light up with an infectious smile and a twinkle in the eye. It was a wonderfully welcome message that he was pleased to see one". How many of us have enjoyed that same experience!

Although when appointed Air Member for Personnel, Andrew's service background was one of flying, Air Staff and command, no man could have been better equipped to deal with the more human aspects of Service life. He had always had a wonderful ability to talk to anybody about his or her job with a genuine and lively interest, though that job might range from the operation of a highly sophisticated control system to the sweeping of a hangar floor. He had understanding and he had compassion.

In 1971 he became C-in-C Strike Command. Again he could indulge his passion for flying and put it to most useful purpose, for he was uniquely capable of assessing the strengths and weaknesses of our front line equipment and the proficiency of our aircrew. His was a copybook example of the exercise of command by a combination of superb professional knowledge and natural instinctive leadership.

Andrew became head of his Service in 1974 and clearly there was a need for an exceptionally able man at the helm for there were troubled waters ahead. He was deeply concerned by what he believed to be dangerous shortcomings in our defence capability and he had the courage openly to say so. As Marshal of the Royal Air Force Sir John Grandy has written "He said so at moments that not everyone found convenient and at times when silence would not have been criticised". But his own comfort counted for nothing when set against his duty as he saw it.

For many years it had been generally accepted that Andrew Humphrey was destined to become Chief of the Defence Staff — perhaps the earliest to record that conviction was that perceptive Field Marshal, Sir Gerald Templer. Within three months of assuming the post he had already made his mark. In January he performed what was to be his last duty, a visit to Army and Air Forces in Germany, during which, need I say it, he got in some helicopter flying. There was no premonition of disaster ahead, but within two weeks of his return he was dead.

The contribution that this modest and unassuming man made to his country and to the Service he so loved, was outstanding. His loss is tragic and a serious one for us and, I believe, for our NATO Allies too.

I have spoken of his life as a serving officer and that was a life filled with activity. Yet somehow he contrived to find time for all sorts of other interests — church architecture, cabinet making, gardening, history and the re-reading of Scott and Dickens — to mention but some. But neither his service duties nor these other interests prevented him from developing warm and generous friendships which have given such enjoyment to so many of us and which we shall so greatly miss.

The hearts of countless service men and women and the hearts of many others in many different walks of life, go out to his widow, Agnes. Theirs was a wonderful partnership, each complementing the other, both respected, admired and loved by all. Agnes was no stranger to Service life; she had been a Flight Officer in the Women's Auxiliary Air Force and wherever she and Andrew were, at home or abroad, she endeared herself to all through her charm, through her care and concern for her husband and through her unremitting efforts on behalf of the welfare of service families.

She will not be unaware of the great affection and respect in which her husband was universally held and a measure of which is shown by the great number of his colleagues and friends from so many nations, here in Westminster Abbey.

In Shakespeare's words "His life was gentle and the elements so mixed in him that nature might stand up and say to all the world — This was a man."

# 1978 - Obituary Sir Andrew Humphrey (6d)

## PORTRAIT OF MARSHAL OF THE ROYAL AIR FORCE SIR ANDREW HUMPHREY

A portrait of the late Marshal of the Royal Air Force Sir Andrew Humphrey, Chief of the Defence Staff from October 1976 to January 1977, was unveiled at the College on 19 December 1977.

The portrait, painted by Mara McGregor, is the fourth by the artist to be hung in the dining room at the College. It was unveiled by the Chief of the Defence Staff, Marshal of the Royal Air Force Sir Neil Cameron who was at one time Assistant Commandant at Cranwell.

Those attending the unveiling ceremony included Lady Humphrey; Air Chief Marshal Sir Michael Beetham, Chief of the Air Staff; Air Chief Marshal Sir John Aiken, Air Member for Personnel; and a former Commandant of the Royal Air Force College, Air Chief Marshal Sir Neville Stack, Air Secretary. The Old Cranwellian Association was represented by Air Commodore E D McK Nelson its Vice-President, Group Captain F E Nuttall and Wing Commander M E Howells. The artist was also present.



*Air Chief Marshal Sir Michael Beetham, CAS, Lady Humphrey and Marshal of the Royal Air Force Sir Neil Cameron, CDS, admire the portrait of Marshal of the Royal Air Force Sir Andrew Humphrey*

# 1978 - Obituary Sir Andrew Humphrey (6e)



*Lady Humphrey presents the Andrew Humphrey Memorial Gold Medal to Squadron Leader G L Thurston*

## THE ANDREW HUMPHREY MEMORIAL GOLD MEDAL

In memory of Marshal of the Royal Air Force Sir Andrew Humphrey, GCB, OBE, DFC, AFC, Chief of the Defence Staff 24 October 1976 to 24 January 1977, Lady Humphrey has generously donated a specially designed gold medal which is awarded annually to the best student on the General Duties Aerosystems Course within the Department of Air Warfare at the Royal Air Force College.

To mark the occasion of the inaugural award, Lady Humphrey honoured the College by making the first presentation at a special ceremony on 14 December 1978. Lady Humphrey, accompanied by the AOC and Commandant and Mrs Harcourt-Smith, was met at Whittle Hall by the Deputy Commandant, Air Commodore Carver and the Director of the Department of Air Warfare, Group Captain Leech. After coffee there followed a presentation on the General Duties Aerosystems Course by the Directing Staff Aerosystems Section, Wing Commander

Wilkinson. The party then drove to College Hall for the presentation of the memorial gold medal in the Rotunda. The ceremony, attended by staff and students of 11 GD Aerosystems Course and their wives, was opened by Air Commodore Carver who read the citation and invited Lady Humphrey to present the Andrew Humphrey Memorial Gold Medal to the winner, Squadron Leader G L Thurston, MA.

Squadron Leader Thurston, a graduate of Oxford University, joined the Royal Air Force in 1969. He trained as a navigator and flew Buccaneer aircraft with No XV Squadron in Germany. In 1976 he returned to No 6 Flying Training School at Royal Air Force Finningley as an instructor. On completion of No 11 GD Aerosystems Course, Squadron Leader Thurston was posted to the Royal Air Force College, Department of Air Warfare as the Astronautics and Ballistic Missiles Specialist.

After the ceremony a luncheon was held in College Hall.



**No 11 GD AERO-SYSTEMS COURSE**

Back Row (l to r): *Flt Lt V Strachan: Flt Lt C Morris: Flt Lt S Heppenstall: Lt P Taylor RN: Flt Lt M Ellaway: Flt Lt A Thompson: Capt V Spreccacener IAF.*  
 Centre Row (l to r): *Flt Lt K Walne: Flt Lt I Sampson: Flt Lt G Thurston: Flt Lt A Lovett: Flt Lt R Hardcastle RAAF: Flt Lt B Robinson RAAF: Flt Lt J Sabin: Lt C Landi IAF: Capt J Freedman USAF.*  
 Front Row (l to r): *Lt P Fothergill RAN: Sqn Ldr K Bomber: Sqn Ldr D Adams: Sqn Ldr S Glencorse: Lt Cdr C Linsell RN: Sqn Ldr P Goodwin RAAF: Sqn Ldr R Kemp: Sqn Ldr P Barrett.*

# 1982 - Mr J Holt (7)

## OBITUARY

### MR J HOLT MBE, BEM

Those who were at the College in the 1950s will be saddened to hear of the recent death at the early age of 59 of one of Cranwell's most

legendary characters - Flight Sergeant (latterly Warrant Officer) Jack Holt. Perhaps in the whole history of Cranwell no member of its staff at any level has been so vividly

remembered. Many a current Station Commander would have sprung automatically to attention if he heard a scream of "Mr Murgatroyd"!! (if that was his name) uttered in the unique parade ground voice of Jack Holt.

Jack, who alternated between C Squadron and the Junior Entries for the 9 years following his arrival in 1952 as a 28 year old Corporal/Acting Flight Sergeant, was entirely in a class of his own as a drill instructor, so far ahead of any rival that I have never seen his standards approached. No one could look the part better - just above average height, immaculate in uniform, fierce in aspect, his prominent ginger moustache irreverently immortalised in his nickname "Bogbrush". His orders were awe-inspiring, his domination of a squad of up to 70 cadets at a time total, his correction of the minutest error of detail unerring, his grasp of humorous metaphor brilliant.

Yet Jack was far more than a mere drill

instructor. He was in his element in Junior Entries: it was he who decided and imposed the required standards of turnout and discipline. Indeed, he decided the minutiae of the Junior Cadets' lives. He made up and typed the daily orders, carried out the inspections - even ordained when cricket matches were to be played between the Junior Entry and the Sergeants' Mess. Perhaps the most important lesson he ever taught was that the highest standards can only be achieved in any activity by total effort. He gave - and got - total effort. He retired to his native Yorkshire after over 36 years service, with the MBE and the BEM, only last year.

He was, in a metaphor that those of the Cranwell generation he trained will understand, the Don Bradman of RAF NCOs: there were many other excellent individuals but he stood so far above all of them that he was completely in a class of his own. He will be very much missed.

# 1983-1984 - Obituary Air Mshl Nicholettes (8)

## OBITUARY

### AIR MARSHAL SIR GILBERT NICHOLETTTS

*By Augustus Tilley*

Air Marshal Sir Gilbert Edward Nicholetts, who has died aged 80, was a pioneer of flying-boats and in February 1933, set a world air record.

With Squadron Leader O R Gayford he flew a Fairey long-range monoplane with a Napier Lion engine 5,431 miles non-stop from Cranwell to Walvis Bay, South West Africa. The flight took 57 hours 25 minutes.

Five years earlier in 1927-28 he had been a pilot in a team of four Southampton bi-plane flying boats which flew 27,000 miles from Plymouth to open up air routes to Australia and the Far East.

The open cockpit planes cruised in the Far East, visiting Hong Kong and Australia before landing at Seletar, Singapore in December 1928, after a 14-month mission.

A Royal Navy cadet at Osborne and Dartmouth, he was transferred to the RAF in 1919 when the Navy was reduced under the "Geddes Axe". He thus became one of very few officers who passed through Osborne, Dartmouth, Keyham and Cranwell as well as later, the Staff College.

He was stationed at Calshot from 1922 and was with the Mediterranean Fleet and the aircraft carrier Eagle in 1924-26. After the Far East flight of flying boats he was stationed at Singapore with No 209 Sqn for four years.

He was awarded an Air Force Cross in 1931 and gained the Bar in 1933 for the world record flight which also won him one of the first silver medals of the Royal Aeronautical Society.

From 1936 to 1938, he served in Iraq and during the 1939-45 war commanded No 228 Sqn from 1939 to 1941 at Haifa and Shallufa. In 1942 he was taken prisoner by the Japanese at Java.

After the war he was Air Officer Commanding the Central Photographic Establishment from 1946 to 1948, and Director of Organization, Air Ministry, from 1948 to 1951. After a spell with Flying Training Command, he became Air Officer Commanding Malta, and Deputy CinC Allied Forces Mediterranean from January 1956 to December 1957.

He was Inspector General of the RAF in 1958-59. He was appointed a CB in 1949 and made a KB in 1956. A bachelor till he was 53, he married Mrs Nora Beswick, daughter of Mr Francis Butt of Chester in 1956.

## IN MEMORIAM

We record with regret the deaths of the following Old Cranwellians during 1985/86:

Flt Lt M Barnard 23GE; Flt Lt P J Blewitt 75B; Fg Off D V Browning 65 IOT; Flt Lt C J E T Chubb 90B; Fg Off R H Dennison 57 IOT; Fg Off D C Hyde 81 IOT; Fg Off M A Ramsay 50 IOT; Flt Lt I M Redwood 24GE; Fg Off M J Rowe 60 IOT; Flt Lt W Steele 29GE; Flt Lt L Stovin 41 IOT; Sqn Ldr J P Towl 7GE; Flt Lt M V Vaughan 42 IOT; Fg Off G B Ward 59 IOT; Flt Lt D P Wardell 44 IOT; Flt Lt B D Weatherley 34 IOT; AVM B C Yarde 24-26B.

# 1986-1987 - Obituary AVM BC Yarde (9)

## OBITUARY

### Air Vice-Marshal B C Yarde

Air Vice-Marshal Brian Courtenay Yarde, who has died aged 81, played a crucial role in the Berlin Airlift of 1948 after the Russians blockaded the city.

As commander of RAF Station Gatow, Berlin, he handled more than 900 aircraft movements a day at the peak of "Operation Plainfare".

When he took up the appointment in 1947, Gatow was a quiet airfield dealing with only a few passenger aircraft each day but during the airlift it became the busiest airport in the world. Altogether, nearly 116,000 aircraft, carrying more than 860,000 tons of supplies for Western Berlin, landed there.

He was later Provost Marshal and Chief of the RAF Police, Air Officer Commanding No 62 Group and, finally, Commandant-General of the RAF Regiment and Inspector of Ground Combat Training.

He was educated at Bedford School and won the Sword of Honour at RAF College, Cranwell. In the 1930s he was with the School

of Naval Co-operation and served in Iraq.

During the 1939-45 War he served in France, Malaya, and the Middle East. He also commanded the bomber stations at Lakenheath and Methwold and was mentioned in despatches three times.

In 1945 he was appointed deputy director of Bomber Operations at the Air Ministry. He was senior director of the RAF Staff College for a year before being posted to Gatow.

At the Coronation he led and commanded the RAF contingent in the procession.

He retired from the RAF in 1957 and was subsequently chairman of Courtenay Caterers, of Andover.

He was appointed CBE in 1949 for his services in the Berlin Airlift and CVO in 1953 for his part in the Coronation ceremonial.

He is survived by his wife, the former Marjorie Smith and their two daughters.

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# March 1997 - Obituary Air Cdre ED McK Nelson (10)

## OBITUARY

### AIR COMMODORE E D McK NELSON CB DL

Air Vice-Marshal M D Lyne CB AFC\*\* DL RAF(Retd)

Eric Nelson entered the College in January 1931 and thus starting his flying training in open cockpit Avro 504 aircraft under the most stark conditions. He did his advanced flying in Atlas biplanes, also without protection from the weather.

But as a keen sailor he may have already been prepared to put up with wet, cold and the misbehaviour of craft affected by the wind. At any rate he passed out with an 'Above Average' grading and went on to No 12 Squadron and then into the Fleet Air Arm, where catapulting, deck landings and floatplane flying were difficult skills to be learnt.

His career nearly ended here when he was towing targets for naval gunners and thought that their fire was getting too close to his aircraft. When he gave the order to let out 50 yards more of cable his scarf caught in the windlass and choked him. The airman in the back first cut the scarf and then leaned over to slap his face. Eric came to just in time to alight on the sea and then passed out again. The airman was doubly lucky - he saved his life and was not court martialled for 'Striking an Officer'.

Flt Lt Nelson was a leading boxer, holding the RAF Championship for his weight for 3 years. He was also a natural sportsman, doing the pentathlon and yacht and dinghy racing. In his Service duties he was a flying instructor and, in 1941, was sent with a team to Australia to start a training scheme. Here he did well with the local people and also became a good surfer by their standards.

After a hair-raising voyage back to England in 1943 he took command of a Lancaster Squadron involved in the Battle of Berlin. When promoted to Gp Capt in 1944 he went to Manby. In 1946 he had a happier Lancaster flight round the world on a technology mission.

His peacetime work included being Asst Comdt of Cranwell before starting the unique series of appointments to the pillars of Trenchard's Air



*Air Commodore E D McK Nelson*

Force, the Aircraft Apprentices School at Halton, the Staff College at Andover and finally as Comdt of the RAF College. No other officer held all of these Commandantships.

He retired in Lincolnshire and the attendance at his Memorial Service showed how beloved he and his wife Yvonne were in our County.

# June 1954 - Frederick Henry Royce (1)

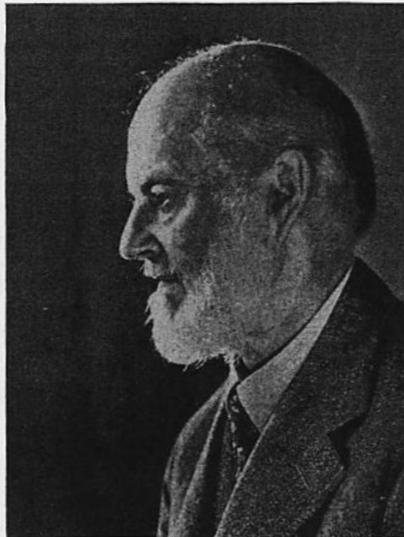
## Frederick Henry Royce: 1863-1933

### Pioneer in the Development of the Aero-Engine

*Twenty-one years ago, Sir Frederick Henry Royce, Bt., the 'mechanic', as he modestly called himself, died. Up to the time of his death, despite an illness that confined him to his bed, he had been the 'engineering brain' of the great firm at Derby that bears his name equally with that of his colleague, the Hon. Charles Rolls, whom he met for the first time almost exactly fifty years ago.*

*The article below gives a brief picture of the life of Sir Frederick Henry Royce. The author, a flight cadet at the College, acknowledges his great debt to Mr Harold Nockolds's book 'The Magic of a Name', without which the preparation of this account could never have been contemplated<sup>1</sup>. The Editor, for his part, would like to express his thanks to Rolls-Royce, Ltd., for supplying the photographs that accompany the article and for their help and advice.*

IN the year 1904 a motor car with a three-speed gearbox glided out of an electrician's workshop and proceeded along Cook Street, Manchester. This was no ordinary car. Its approach was not heralded by all the noises that had hitherto earned cars the title of 'avalanches of tea-trays'. The silence of its progress made people stand and stare. Behind the wheel sat a bearded middle-aged man with a smug expression on his face. The facial expression is explained by the fact that the driver had designed and built the amazing vehicle himself. It was driven without breakdown, a feat in itself in those days, to the designer's home in Knutsford—the home of an electrician, Mr Royce.



Sir Frederick Henry Royce

Frederick Henry Royce was born at Alwalton, Lincolnshire, on 27th March, 1863. A precocious interest in engineering nearly brought him to an untimely end when at the age of two years, in an attempt to inspect the water mill wheels near

<sup>1</sup> *The Magic of a Name*, by Harold Nockolds, illustrated from paintings by Roy Nockolds, and published by G. T. Foulis & Co., Ltd., London. A copy of this book will be found in the library.

his home, he fell in the mill-race and would have been drowned had not his father been standing nearby.

His father was not a particularly successful man and unemployment forced him to take Henry and an elder son to London. Henry worked for Messrs W. H. Smith and Sons as a newspaper boy at Clapham and later at Bishopsgate. When Henry was only nine his father died. He then became a telegraph boy at a May-fair post office.

It is doubtful whether Henry would have found his way into the engineering field if it had not been for a kindly aunt of his who lived at Flitton, near Peter-

borough. She paid for his apprenticeship at £20 a year at the Great Northern Railway works at Peterborough. Henry was fortunate enough to be boarded out with a Mr Yarrow, whose interest in tools and machines was such that he had built himself a small workshop in his back garden. In the evenings, Mr Yarrow taught his son (who was also an apprentice) and Henry the use and care of all kinds of tools. In his spare time Henry tried to improve his almost non-existent education by attending evening classes

whenever possible. Unfortunately his association with the railway lasted only three years; his aunt got into financial difficulty and could no longer provide the necessary £20 a year.

Henry Royce went north in search of a job and eventually found one at a mill in Leeds, making tools for a foreign armament contract. His spare time was once again taken up with studies and it was during this period that Royce gained a working knowledge of electricity.

His position at the mill was not what Royce really desired, and an advertisement in a London newspaper brought him south again in an attempt to become a tester for the newly formed Electric Light and Power Company. He was given a job with the company and found lodgings in Kentish Town. He still devoted all his spare time to study. He did very well in his new position and, while still in his 'teens, he became first electrician in a subsidiary firm responsible for lighting in theatres and entertainment halls in Lancashire. But Royce had only been with the firm a short time when it went bankrupt.

All through his life Royce was peculiarly fortunate in meeting the right people at the right time. On this occasion it was another young electrician, A. E. Claremont, who possessed fifty pounds, and together they set up business in Cook Street, Manchester, as electricians. The firm was called F. H. Royce and Co. Royce was then only twenty-one.

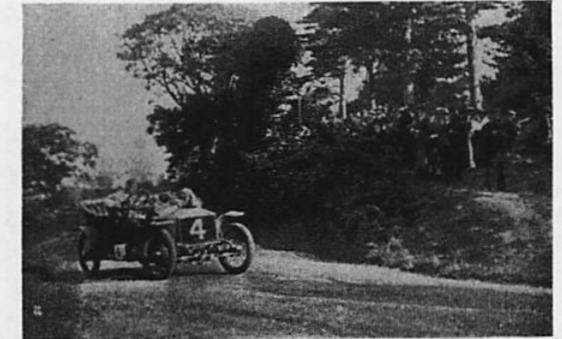
At first Claremont and Royce made lamp holders and filaments. But these did not sell very well, and it was not until the ingenious Royce invented a small, cheap electric bell, which proved to be a very popular item on the electricity market, that their fortunes improved. The two partners often worked all night to make and deliver the bells. Then Royce made an im-



One of the first three Royce two-cylinder cars

portant discovery which brought comparative prosperity to the firm. He found a method of obtaining sparkless commutation on dynamos, a problem which had beaten the best brains of the time. It turned out this way. Royce would not admit that the dynamo of his day was the best there could be; so he designed his own in which he eliminated nearly all the drawbacks of previous makes. About this time he married a Miss Punt of London and started living at Knutsford. They did not have any children.

Royce next turned to designing and building electric cranes. His products were so efficient and so beautifully made that he was overwhelmed by orders, which by 1899 were worth twenty thousand pounds. He became so engrossed with his work that he neglected his



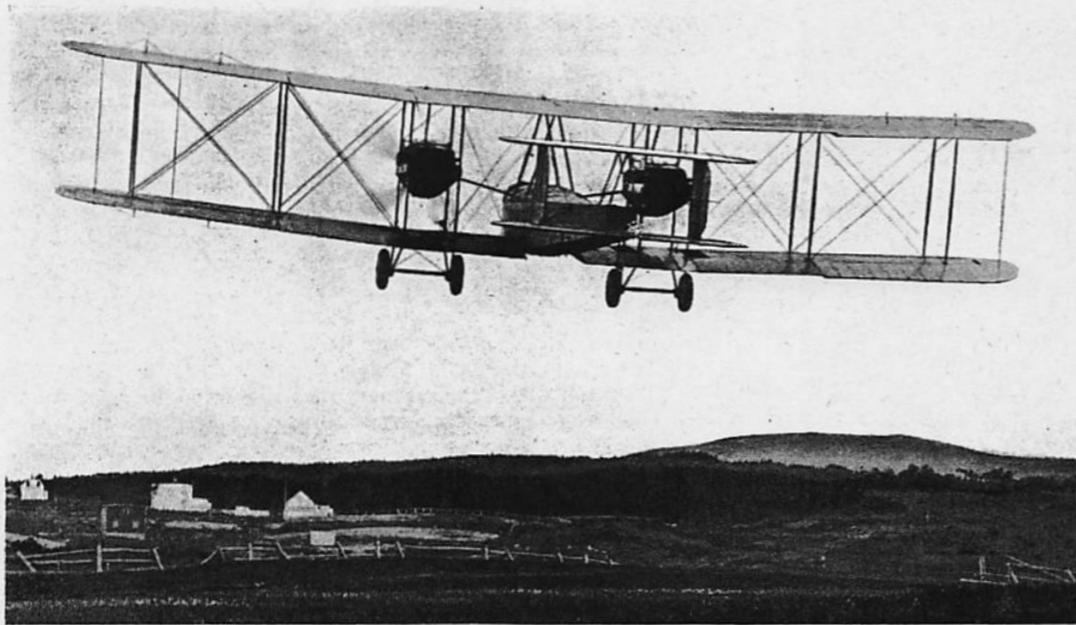
The 20 h.p. Rolls-Royce in which Charles Rolls won the 1906 T.T. race at an average speed of 39 m.p.h.

health. He often went without meals and worked throughout the night. The chief accountant of the firm, John De Looze, alarmed at Royce's habits, employed small boys to run after Royce in the street with glasses of milk and instructions that they were not to come back until Royce had drunk the milk!

The Boer war brought a drop in sales of Royce's products, but he would not listen to any suggestions for lowering the high standard of workmanship of his articles. The fierce competition from the United States of America and Germany caused sales to drop even further, but Royce refused to consider the possibility of trying to compete by turning out inferior goods.

It was in the year 1903 that Royce bought a second-hand Deccuville car and immediately set about improving it. This undoubtedly fired his enthusiasm for cars and in 1903, without any care for his dwindling capital, he announced his intention of building three experimental cars.

# June 1954 - Frederick Henry Royce (2)



*The Vickers Vimy, piloted by Alcock and Brown, taking off from Newfoundland on the first direct flight across the Atlantic on 14th June, 1919. The aircraft was powered by two Rolls-Royce Eagle engines*

Royce put everything he had into his new idea. Each component of these machines was tested by him and again he often worked day and night. He did not, however, make anyone work harder than himself. This is hardly surprising, when one considers that he spent three days and nights on one occasion at the benches trying to solve one particularly difficult problem. He still maintained his high standards and on one occasion dismissed an employee whom he had overheard saying a piece of work was 'good enough'. If he discovered a component that was slightly heavier than it should have been he would bellow down the workshops 'Who is the author of this "sinker"?' Although Royce, or 'Pa', as he came to be called, was very keen to see his first car finished, he did not allow his enthusiasm to get the upper hand, and often scrapped whole pieces of work because they did not conform to his very high standards.

At last, in 1904, his first car, a ten-horsepower, two-cylinder model, was completed, and Royce, having started it with one turn of the handle, drove it on the remarkable journey from his works to his home at Knutsford. He continued building his other two cars during 1904 with little regard for the financial side of his business. This was not, in fact, very sound at the time. But once again he met the right people at the

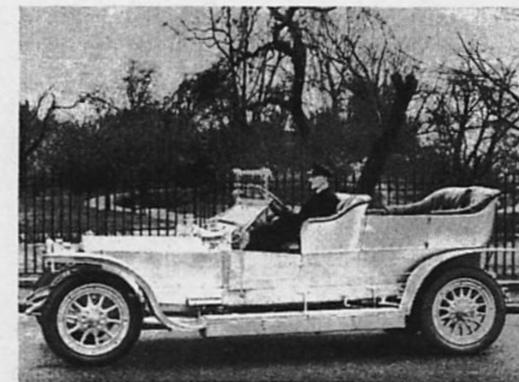
right time. Mr Edmunds, a well-known figure in motoring circles, persuaded a car salesman, the Hon. Charles Rolls, to ride in one of Royce's cars. Rolls was very much impressed with the smooth running of the car and its amazing silence and, after meeting Royce, the two entered a partnership at the end of 1904. So, to the engineering genius and high standards of Royce were added the wealthy sales connections of Rolls, and under the managership of Claud Johnson, an organizing genius, the firm of Rolls-Royce began.

Royce carried on designing and building different types of car. Each one proved to be a first class piece of work. When the speed limit was fixed at twenty miles per hour, he designed a car that could go no faster than this speed. When hill climbing became the fashion in motoring, Royce brought out a car that could climb a one-in-six gradient quite easily with nine 13-stone men on board. In racing both at home and abroad, Royce's cars did exceptionally well. Each new race brought improvement to a car's design and performance. Royce strove for perfection; the name of the firm 'Rolls-Royce' was becoming a household word.

Later, as the demand for 'R.R.' cars increased, it was decided that the Manchester premises were too small and that the firm, if it were to

expand, must expand elsewhere. Here, Royce proved himself to be a shrewd judge of land values. He chose the site at Derby, where the firm still is today. He designed all the buildings and installations himself and, judged by even the most modern standards, the original buildings at Derby are outstanding for their light, airy workshops and efficient layout. The new factory was opened in 1908. Designs were standardized—Royce had a penchant for bringing out many types of car—and for the next few years only the famous 'Silver Ghosts' were produced. These cars—of between 40 and 50 h.p.—Royce believed to be the finest he had produced.

Suddenly, in 1910, the strain of overwork claimed Royce as a casualty. He collapsed, and was taken to London, where specialists gave him only three months to live. Fortunately the doctors were wrong and Royce recovered, but he was never to return to Derby. With Claud John-



*The Rolls-Royce Silver Ghost. All the external metal is silver-plated. This car gave its name to the famous series*

son, he went on a tour of Europe, during which he decided to build himself a house in the village of Le Canadel, overlooking a bay near Toulon.

For the tour, a 'Silver Ghost' had been converted into an ambulance, and on one occasion, while they were driving along the coast road, Royce noticed another car trying to pass them. He shouted to the driver 'Faster, faster,' but the car still tried to overtake them. Then Royce realized that it was, in fact, another 'Silver Ghost' and relieved his driver by saying, 'It's all right; it's one of ours.'

In 1912 Royce returned to England while his house at Le Canadel was being built. He chose to live in Sussex. It was here that he gathered round him a group of assistants and draughtsmen and carried on designing and improving as

before. Ideas would come to him as he lay in bed and he would have them transferred to the drawing board by his staff. The drawings would then be sent to Derby, where they would be translated into machines or motor car engines which, in their turn, were returned to Royce for his comments. He was personally responsible for or supervised every new engine that was produced.

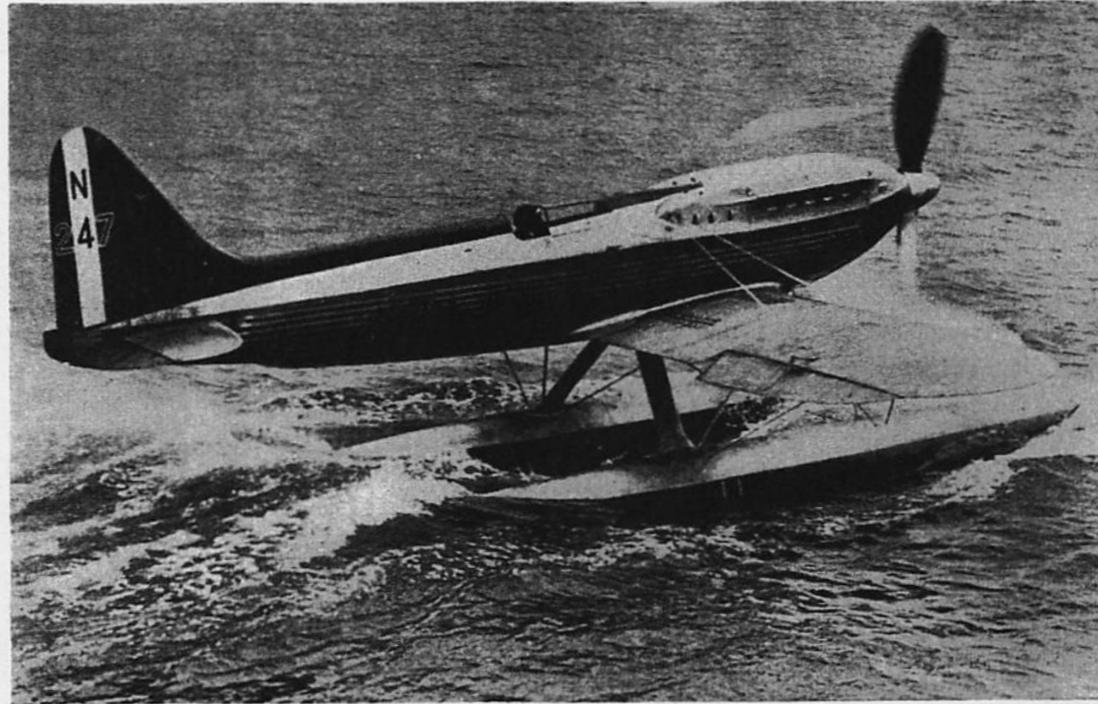
With the outbreak of war in August 1914, Royce found himself unable to move into his new home abroad. He stayed in England and turned his thoughts to designing engines for war. Most of the armoured cars used in the First World War were powered by Rolls-Royce engines, and by 1918 five-ton armoured cars engined by Rolls-Royce were putting up speeds of up to sixty miles per hour.

But the war was by no means a land war; the air assumed an increasingly important part in the calculations of the strategists as the war went on. In the circumstances it is not surprising that Royce's genius became engaged in the production of aero-engines. He was, in fact, asked to assist, for hitherto he had not shown much interest in aero-engines, possibly because his friend and partner, Rolls, had been killed in 1910 flying in an air display at Bournemouth. But it was not very long before the name Rolls-Royce began to mean something in the air. Royce's first engine, the Eagle, was designed to produce 200 horse power, but it actually ran at 25 per cent more than this. A year later he had improved the original Eagle to produce 360 horse power, an engine that without doubt was the finest of its day. When the war came to an end Royce's aero-engines were already being described as the 'soul of an aeroplane'.

The end of the war, however, did not see the end of Royce's efforts in the field of aviation. The first aeroplane to cross the Atlantic, the Vickers Vimy, piloted by Captain John Alcock and Lieutenant Arthur Brown, was powered by two engines Royce had produced specially. The first air passenger service, inaugurated in 1919, also used Rolls-Royce engines.

In 1928 Royce was approached by the Supermarine Company and asked to build an engine for the Schneider Trophy race which was being held in the following year. A scaled-up version of the Kestrel, the Buzzard, was already in existence. (The engine, incidentally, was the same bore and stroke as the present-day Griffon.) The Buzzard was expected to develop about 1000 horse power and, when the firm undertook to provide an engine for the race, it was the

# June 1954 - Frederick Henry Royce (3)



*The Supermarine S6, powered by a Rolls-Royce 'R' engine*

Buzzard engine that was selected for the job. The first proposal was to develop it to produce 1500 horse power and the Supermarine Company accepted this figure. J. R. Mitchell, the Supermarine designer, who was later responsible for the Spitfire, had sufficient confidence in Royce to know that he would give him the right engine in time, and went ahead designing his machine, not knowing what power unit it was going to have. In a manner typical of him, Royce, in three months, brought out his 'R' engine, which weighed only 1530 pounds and which, to the pleasant surprise of the Supermarine Company, was made to develop 1900 horse power in time for the race. The 1929 race, as is known, went to Great Britain with the record speed of 332 miles per hour. Later in the same year 360 miles per hour was attained using the same remarkable engine. Indeed it is no exaggeration to say that the development of the 'R' engine from the Buzzard was the greatest feat in the history of piston-engined aircraft.

Great Britain's aircraft for the next Schneider race in 1931 was also Rolls-Royce powered. This time Royce had improved his 'R' engine to develop 2783 horse power. He had produced an engine 21 per cent more powerful, but only 6.5 per cent heavier. A record speed of 407.5 miles

per hour was attained by Great Britain's entry in the race. Unfortunately all this exertion had its effect on Royce's health. He did not watch the 1931 race, but listened to a broadcast commentary of it from his bed. His body was failing, though his mind remained active. One of his last acts was to lay down specifications for the great Merlin engine.

Sir Frederick Henry Royce died at West Wittering in Sussex on 22nd April, 1933. Throughout his life he had refused to believe that the products of his mind, his engines, were incapable of improvement. A favourite remark of his to young designers was 'You seem to have got it right now, but I think we could improve it in the following way. . . .' At root he was a perfectionist and for him there was no mechanical problem that could not be solved. His exceptional brilliance notwithstanding, he was an extremely modest man. 'I am just a mechanic,' he would say, when people praised him to his face; and it was as a mechanic that he thought of himself. When the great mechanic died, however, the colour of the radiator badge of the Rolls-Royce cars—the famous two 'Rs' monogram—was changed from red to black, a tribute to his memory that is still upheld today.

E. F.

# March 1957 - Cadet's Log Book 1921/22 (1)

## An Incident from a Flight Cadet's Log Book. Circa 1921/22

By C.M.S.

A PILOT in the course of his flying career makes many flights, in many different types of aircraft, on varying duties and frequently in foreign lands. It is therefore not surprising that on looking through his log book entries he can recall little, if anything, about the majority of them. There remain, however, a few entries concerning certain flights, the details of which are quite distinct. The memory, in fact, has become a part of his life. One could say, without fear of contradiction, that a pilot always remembers his first solo and the type of landing he made on rejoining Mother Earth. Such flights in the normal course of events are of interest only to the individuals concerned. Nevertheless there are some flights, of a commonplace nature, which may merit the interest of others, if only to point a moral or cause some amusement.

On browsing through my first Pilots Log Book, which, incidentally, I note was referred to as 'Army Book 425,' I can recall quite clearly a flight I made on 30th October 1922. I was then a Flight Cadet Sergeant in my final term at Cranwell and had flown some 15 hours solo on an Avro 504K. This machine was a biplane and was powered by a 100 h.p. rotary monosoupape engine of French design. The engine was lubricated with pure pharmaceutical castor oil, a fact which it seemed to dislike as it threw the oil out all over the fuselage and, to a not inconsiderable extent, over its pilot. It was, however, a good training aircraft, and, in spite of its rather dirty habits and the fact that the engine occasionally threw off a cylinder or two at inappropriate moments to the acute embarrassment of inexperienced flight cadet pupils, I have always retained a warm spot for it in my heart.

My memory tells me that the weather on the morning of 30th October was bright and sunny with about 3/10th cumulus clouds at about 3,500 ft., there was a distinct nip in the air and the wind was from the west at about 20 m.p.h. (knots were not used in those days). On arriving at 'C' Flight my instructor, F/O E. D. Barnes, now a retired Air Commodore, told me to fly in Avro C8 and take it up as high as it would go. To the flight cadet of today this must seem a most inadequate briefing, but in those days it was

sufficient, and I lost no time in getting into my overalls and helmet and into the cockpit of C8 for fear my instructor might change his mind. 'Switches off, suck in,' shouted the mechanic, and after I had checked the switches and repeated these words the fitter turned the propeller to 'suck in' the mixture. 'Contact,' called the fitter, and when I had echoed 'contact' and closed the switches he swung the propeller. The engine fired with the usual accompaniment of clouds of blue smoke being hurled back from the rotating cylinders. After the smoke had cleared and the engine was firing evenly, I ran it up and tested revs and switches. All being satisfactory I waved away the chocks, taxied out and took off.

I climbed steadily to just under the clouds, which had then increased to about 4/10th, and, having found a large gap, I spiralled up through it. At 7,000 ft. I was above them and the Avro was getting rather sluggish. The rate of climb had fallen off considerably, but I coaxed her along and eventually, about 50 minutes after I had taken off, the altimeter needle stood steady at 10,000 ft. By this time I was getting pretty cold and my hands had lost most of their feeling due to the extremely cold air which was whistling into the open cockpit as well as through all the small slits and joins in the fabric of the fuselage, and against which my overalls were of little protection. I decided that, as far as I was concerned, this was as high as she would go, and I doubt if the Avro would have disagreed with me, so I closed the throttle and spun down to the top of the cloud, which had by then increased to approximately 6/10th coverage. A short search soon revealed a gap through which I dived.

During the climb I had kept mainly on a westerly heading to offset the drift of the wind, but obviously either I had misjudged this very badly or the wind at altitude had increased considerably. I found myself over country where I could not establish any landmark. I would have given a lot to have seen the old black hangars at Cranwell and the enormous airship shed known as 'Lighter than Air' on the site now occupied by the officers married quarters, but no amount of searching could reveal them. After about a quarter of an hour scanning the ground and

peering at my map in a fruitless endeavour to find my position I had to admit to myself, with a nasty sinking feeling in my tummy, that I was well and truly lost and had to do something about it. Clearly it was useless just going on flying round in the hope that I might have a lucky break in pin-pointing myself, as such luck would more than likely not come my way, and I would run out of fuel and be forced to make a 'dead stick' landing with every chance of making a mess of the Avro and myself. There did not seem to be much future in that course. The only alternative was to make a landing whilst I still had an engine and find out my position. This solution was not to my liking either as I had never made a landing before except on the spacious acres of Cranwell, and all the fields beneath me seemed to be mere pocket handkerchiefs surrounded by good stout hedges. However, there it was and with my heart thumping against my ribs I shut off the engine and glided down. I had picked the biggest field and had noted the direction of the wind, but my approach was far too high and I opened up the engine and went round again. In all I made three attempts to get in that field and then got tired of it and tried another. Altogether I think I must have made passes at half a dozen fields and twice had almost touched down but noted in the nick of time that the hedge in front was far too close and struggled into safety again with a labouring engine. By this time I was in a pretty jittery state, when by good luck and I am sure the Grace of God, I made a better approach. 'Slipping off' the extra height in copy book style, I sat down just over the hedge, but unfortunately a little out of wind, with the result that the Avro swung round rather abruptly, dipping its right wing and breaking the wing-tip skid. I switched off the engine and climbed out of the cockpit on to a pair of rather wobbly legs.

My attempts to land had, not unnaturally, alerted most of the neighbourhood, and it was not long before I was surrounded by a fairly large collection of farm labourers, gazing at me and the Avro in undisguised astonishment and admiration. Aeroplanes in those days were not the commonplace things they are today and those who flew them were regarded as something above the ordinary mortal, all very nonsensical but nevertheless distinctly uplifting to the ego of a young man of 19, and mine certainly needed some elevation at that moment. In response to my request I was told by the assembled company that I had landed near a small village called Car Colston and horny fingers were soon tracing uncertain grubby marks on my map, which I had

laid out on the wing, to point out its position. I was relieved to see that it was not far from Cranwell and to know that I had sufficient fuel to return there.

I was just about to ask the farm hands to help me lift up the tail of the Avro and push the aircraft back to the extreme down-wind end of the field, so as to give me the longest possible take-off run, when I became aware of a very pretty girl standing by my side. At this range of years I am unable to give a detailed description of her, but I certainly remember she was decidedly easy on the eye. I introduced myself and explained to her the reason for my landing, where I had come from and that it was my intention to try to take-off and return to Cranwell. She told me that I had landed on her father's property and asked if she could help in any way. I suggested that she should telephone Cranwell, inform them where I was and that I hoped to be able to take-off and return in a short while. She promised to do this, adding a charming invitation to lunch at her home, which was only a short distance away, if I could not start the engine. Needless to say I accepted with alacrity.

With the assistance of the labourers we soon manhandled the Avro to the down-wind part of the field and there I tore off the broken wing-tip skid as I feared it would foul the aileron in flight. I had a good squint at the take-off run and decided that it was possible, if everything went well. The most difficult part was then to come, which was to instruct one of the farm hands how to swing the propeller. Selecting the strongest and most intelligent chap I showed him how to do it, taking good care that the switches were 'off.' At first he shied off in horror, but with a mixture of encouragement and derision from his friends he agreed to try, and after some practice swings I decided that he was reasonably competent. Stationing the remainder of the farm hands at the leading edges of the wings to prevent the Avro from moving forward should the engine start, I went round to the side of the cockpit and set the throttle to 'suck in' and then hurried back to rotate the propeller and set it on compression for the swing. Dashing back again on to the wing by the cockpit I yelled to my erstwhile mechanic to swing the propeller. This he did with great vigour, and as I set the switches to 'contact' the engine, much to my astonishment, roared into life. Blipping the engine on the thumb switch on top of the joystick I managed to get off the wing and into the cockpit and do up my safety belt, my feelings meanwhile dithering between elation at

*(Concluded at the foot of page 33)*

# March 1957 - Cadet's Log Book 1921/22 (2)

## An Incident from a Flight Cadet's Log Book (*cont. from page 30*)

achieving something which I thought was highly improbable and acute disappointment at the thought that I had lost my lunch with the lovely lady.

Waving away the farm hands who were standing at the wings, I opened the throttle and was relieved to hear a full-throated roar and see the revs go up to peak. The surface of the field was rough and as I gained speed I literally bounded on my way, finally clawing the Avro off the ground after a particularly sickening jolt and saw the hedge skimming away beneath me. After having made a circuit to wave to my helpers and to an attractive figure standing in the drive outside a pleasant house, I set course for Cranwell, which I reached in 20 minutes, and with some hundred acres at my disposal I had no difficulty in making a good landing.

On the tarmac I was met by an extremely irate flight commander who demanded, with embellish-

ments, to know what the devil I had been up to, landing in a field to have lunch with a girl friend? Apparently the lady in question had been somewhat enthusiastic in her telephone conversation, and in addition to giving the information I had asked her to convey had implied that there was a strong possibility of my having a cosy little lunch with her. In vain did I plead my innocence of any predetermined luncheon date. Later that day, with cap off and under escort, I stood at attention in front of my squadron commander. My explanations were heard, questions were asked and answered and after a long, steady look at me the squadron commander dismissed the case. But in the quarter of an hour that I was under trial I felt that my stripes were only remaining on my sleeves by the barest threads.

Is there a moral to this story? I suppose so: do not mix up pretty girls and aeroplanes; one or the other is bound to get you into trouble.

# March 1957 - Cadet Wing Officer

## THE ROLL OF A CADET WING OFFICER

*'A man's name is, to him, the most important word in the English language.'*

(Notes on Leadership)

POSTED from a greenhill far away I drove along a lane bordered by what the locals call the green meadows of Lincolnshire. Leaving Waddington and Digby behind me, I passed the V.H.F. homer, after which the noble edifice came into view. Up the rise past the huts of the old prentis wing, once the holmes of many an unfortunate, I arrived to take up arms against a sea of troubles; little did I know of that sea or I would have struck out for the shaw immediately.

As ordered I reported on Mundy (the wrong one, of course) and started to take stock of the situation. A mass of faces greeted me, each one no doubt a jewell in his mother's eye and all determined to become a Nelson of the air; some meek and tame but most of them gunning for any officer at hand. They are a body of cadets that Air Ministry drew from Kent to Gallwey, and from Stroud to the Iles; a selection that is not likely to tickell my fancy.

My first day started at noon after my kidney and bacon for breakfast (or is it 'tiffen' to our 'colonials') by carrying out a room inspection. I found in the first room a bunch of hicks (mostly tite) playing cards, looking very scruffy, all with hayr like fluff under the maden's bed, the curtin dragged from window, and beer bottles on the window sills; quite unperturbed by my entrance, the chaplin (the goodman who ran the school) greeted me with 'one no trump.'

The next room that I entered was occupied by a little rea of sunshine, who for his thesis on the feathered world was trying to cross a

French heron with a brown finch. I did not understand but he did say that he hoped to get a rainbow sand martin.

The third room was apparently the squadron kennel occupied by a St. Bernhard, an enormous kerr that beggs pathetically and then leans on you, whereupon I was projected through a steel locker door and back into the passage. only to be knocked off my feet by a senior cadet who was demonstrating, quite unsuccessfully, how to slide down the bannister and avoid the bottom spike. Seeking to avoid being mauled further I sought healing waters to bathe my injuries.

Expecting better fortune in my office, I retired thither, only to find a cadet who had a bee in his bonnet about his pay. His complaint was that the price of everything was so high that as soon as he got his pay he blewitt all and was then owen everybody to the end of the month—he said he could never get out of the wood. Poor fellow, I could quite see his problem, particularly as he had to run a Bentley carr-white with green upholstery.

During the afternoon I was having a potter across the Orange when I was pulled up and informed that at 1600 hours the clock bell tolls the nel of passing day and that I shouldn't walker bout.

The next day I was posted—Q.R. 332 I think they call it—unsuitable for the post, or something. . . .

I TOLD THEM THAT I COULD NEVER REMEMBER NAMES.

(With apologies to seventy-two Flight Cadets at present at the Royal Air Force College.)

## THE CRANWELL NAVIGATOR

IN January 1956 the first cadet navigator started his training at the College. He has been here for a little more than a year now and it is interesting and possibly of some help if a look is taken at what he is accomplishing, hopes to accomplish and how his training compares with that of the more widely known pilot training.

Like all other cadet training here, the first and foremost task is to lay the foundations of a good officer.

A great deal of juggling was required originally so that the navigator could take, with the pilots, classes directed towards this end. The humanities, Squadron training, general service subjects, etc., are the same for both navigator and pilot and it sounds at first as though no real difficulties

are to be encountered. Then one realizes that whereas the pilot can report to the flight and be absorbing airborne instruction after a relatively few minutes' briefing on the ground (except for cross-countries, of course), the navigator is required to prepare his maps and charts, calculate his flight plan and have the purpose of the exercise explained as fully as possible if any value at all is to be obtained from the flight.

This is in addition to the full crew briefing which takes place just prior to take-off. Also the flight must be of at least two to three hours' duration. All praise then to the planners for managing to incorporate this extra time into the normal syllabus.

Now what about the rest of the ground training? The navigator receives roughly twice

# March 1957 - The Cranwell Navigator (2)

the amount of Electronics instruction as the pilot. A further departure from the normal is the fact that a large amount of practical work has been introduced. With soldering iron and tools various, the navigator is kept busy making and dismantling amplifier units, power packs, receivers, etc., so that eventually he will be able to diagnose and correct faults as they occur or at least be able to give precise details of unserviceability to ground crew upon the aircraft's return.

His flying starts from the first term and in the initial stages he receives 6s. per flying day in addition to his basic pay, with full cadets' flying pay from the start of the second year. These same conditions exist for the pilot.

As far as his practical navigation is concerned, he is led gently into map reading, thence to simple air plots interspersed with practice in the use of radar aids until he is in a position to be sent off as the executive navigator which is somewhat comparable to the pilot's first solo. The navigation then becomes progressively more advanced both with and without the supervision of a screen navigator and at the end of this three years' work at the College he should be able to make use of all aids including Astro, and also have some experience of the techniques used by Fighter, Bomber, Coastal and Transport Commands.

An interesting proposal at present is that of the cadet navigator being shown how the Provost flies. A flying instructor would, in a very few hours, demonstrate the effect of controls, stalling, spinning, etc., so that the navigator may appreciate more readily how the aircraft works and benefit from really comprehensive air experience.

During his second year it is also proposed that he will navigate the Vampire or Meteor aircraft, thus gaining practical experience of the problems involved in high-speed high-level flight as soon as possible. Overseas exercises are also included in order to broaden experience in long-range navigation, crew co-operation and officer training.

The academic syllabus covers a great deal

more than that of the normal Air Navigator school and the Cranwell navigator will be well equipped to take up Staff duties when the time comes. Most important from his point of view is the indisputable fact that, backed by his College experience, he will have every opportunity of pursuing a career equal to that of the pilots with whom he is now training.

With the aid of their crystal ball, without which all navigators are lost, the Navigation Section at Cranwell has peered into the future and produced No. 270 Entry's Astrogation paper. After completing these questions, keen types can find specimen answers below.

## No. 270 Entry

Subject: Astrogation Place: Planet 3 (Terra)  
Time: 1st Phase 2057

*Observe:* All Extra Sensory Perception screens are to be in place before commencement.

1. Describe the modification you would make to a Mk III Interplanetary Drive in order to adapt it for interstellar acceleration.
2. With the aid of a diagram, show the working principle of an Hieronyman machine.
3. (a) What precautions would you take before entering space warp?  
(b) Would these precautions apply in the Southern Celestial hemisphere?
4. Your Spherical celestial computer reads:  
Venus 37-23-36 Beta Orion 12-17-48. The Star Cluster in Andromeda 4 is in sight line. You are proceeding from Terra to Dryndel 4 (Sol Type system X 1a). What is:  
(i) Track made good.  
(ii) Space speed in parsecs per sec.
5. Why is it necessary to remove a space vehicle five diameters from a planet before the Lawlor Drive becomes effective?
6. (a) Detail any five of the Space Code enforcements.  
(b) Describe the form of salutation required when meeting a class II Venusian Intermediary.

# Autumn 1962 - The Original "Three Degrees"



*Pilot Officer R. P. O'Brien, B.A.*

*Pilot Officer A. Q. M. Ross, B.A.*

*Pilot Officer R. M. Annett, B.A.*

## LEARNING BY DEGREES

A flight cadet at Cranwell can profitably fill his time without taking on the additional burden of trying for a degree. To learn to fly, to become a competent, professional officer, to make a respectable contribution to the activities of the College, to pass his examinations, and to enjoy life to the full, all this might well be reckoned a sufficient assignment for the space of three years.

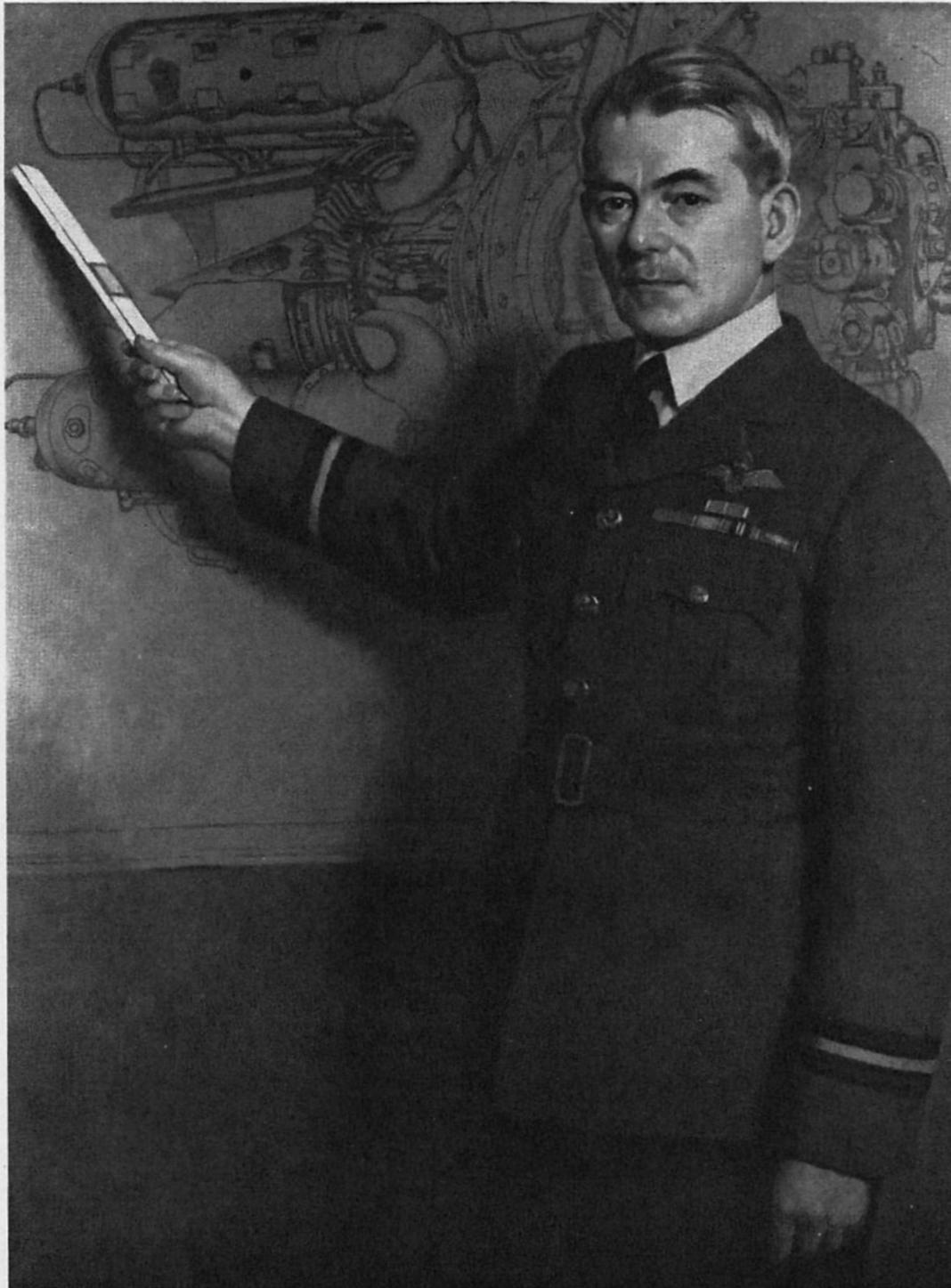
Even so there will remain a minority coming to Cranwell who have the intellectual endowment, the educational background, and the necessary ambition to achieve something tangible in the academic field. There would be something amiss if this were not so. This minority might well have faced the choice of entering Cranwell or going up to a university. Having chosen Cranwell, it is right that they should feel constrained to put their academic ability to the test, and for the good of themselves and of the Service to take up a course of study more ambitious than the normal curriculum allows for.

The present syllabus, introduced in the autumn of 1959, both demanded a higher and broader standard from all, and made allowance for the minority who wished to attempt degree standard. No. 81 Entry were the first to start on the syllabus. A handful of them entered the specialist streams; a dozen or so scientists into the "B" stream for Parts I and II examinations for Associate Fellowship of the Royal Aeronautical Society and eight Arts men into the "C" stream for London University's B.A. General degree in War Studies and two other subjects of their own choice.

By the time of their final examinations last July, membership had been pruned to eight in the "B" stream and six in the "C". Their results were published just before the summer passing-out. Three of the six B.A. candidates were successful: Under Officer O'Brien, Under Officer Annett and Senior Flight Cadet Ross. Senior Under Officer McCarthy failed only in one subject. Of the eight A.F.R.Ae.S. candidates, two were awarded complete passes: Senior Flight Cadets Lanigan and Sawyer; and three more, passes reserved in one subject: Senior Flight Cadets Fazakerley, Keats and Sturt. Not, perhaps, a sensational result, but certainly a fair beginning. And these were the first cadets ever in the General Duties Branch to achieve degree-level qualifications while under training.

Was it worth it? Those who were successful had the reward of a tangible achievement and a permanent qualification; those who failed, at least the benefit of an academic course that stretched them and took them to their limit. As members of the specialist streams they had to work many hours when their colleagues were relaxing. Sometimes they ran into difficulties with the conflicting demands of squadron life. Sometimes the whole effort seemed out of proportion. Like St. Paul's Cloud of Witnesses, they were tempted, afflicted and tormented. As a rule they took the difficulties in their stride, and enjoyed both the work itself and the sense of achievement that it gave; and at the end probably not one of them regretted it. All honour to them, and good luck to those that are following them.

# January 1970 - Whittle Article (1a)



AIR COMMODORE SIR FRANK WHITTLE

## SPECULATION \*

By FLIGHT CADET F. WHITTLE.

I was once asked by an optimistic sub-editor of this magazine for an account of how I intended to reach the moon. I was naturally a little shaken at first, as I have never contemplated leaving this homely planet, but, thinking that I might write a little light fiction, I promised; only to find that I cannot rise to the level of Verne or Wells. It, however, caused my thoughts to soar above the tropopause (for the benefit of those who have never been initiated to the mysteries of meteorology, the tropopause is that altitude above which the temperature of the atmosphere remains constant), and the following speculation is the result.

The trans-Pacific flight marks the greatest step in aviation to date, yet it is little more than a score of years since the crossing of the Channel by air was acclaimed as a marvellous feat. There is no reason to suppose that this progress is going to cease, and it is my intention to discuss possible lines of future development. We are not yet satisfied. We want greater range, greater speed, better freight-carrying ability, and more economical air travel.

The formula connecting distance which may be flown with the characteristics of an aeroplane using petrol is

$$R = 2800 (\phi) \psi \eta \text{ Log. } \left[ 1 + \frac{\omega}{W} \right]$$

where  $R$  is the distance in miles which may be travelled in still air, by an aeroplane of weight  $W$  lbs. (without fuel) carrying  $\omega$  lbs of petrol ;  
 $(\phi)$  is the thermal efficiency of the engine ;  
 $\psi$  is the airscrew efficiency ;  
 $\eta$  is the lift drag ratio of the whole aircraft.

It may be seen that  $R$  will be decreased by increasing the speed of a given aeroplane beyond that for its incidence of maximum Lift / Drag ratio, as the rapid increase of passive drag would cause a decrease of  $\eta$ .

It may also be seen that as  $R$  is in air miles, the actual range depends upon the winds encountered. Now above the tropopause (about 35,000 feet) such things as depressions do not exist, because this region is isothermal, consequently there are no convection currents. Therefore winds, if any, will be of constant value.

There is another case for high altitude flight. The density of the atmosphere falls off very rapidly with altitude, and for an aeroplane flying at a given incidence (its best) at any altitude,

its speed in level flight must be  $\sqrt{\frac{\rho_0}{\rho_H}} V_0$ , where  $V_0$  is its speed at ground level for level

flight,  $\rho_0$  is the ground level density of air, and  $\rho_H$  is the density of air at the altitude of flight. As the lift and incidence are the same as for ground level, so also will be the drag. Therefore

$HP_H = \sqrt{\frac{\rho_0}{\rho_H}} HP_0$ , where  $HP_0$  and  $HP_H$  are the horse power for level flight at ground

level, and the power for level flight at that altitude respectively. Similarly, as the air forces on

the airscrew will be the same,  $N_H = \sqrt{\frac{\rho_0}{\rho_H}} N_0$  where  $N_0$  and  $N_H$  are the rate of rotation

\* This article first appeared in the 'RAF Cadet College Magazine,' Autumn 1928.

# January 1970 - Whittle Article (1b)

of the airscrew at ground level and at that altitude respectively.

The value of  $\sqrt{\frac{\rho_0}{\rho_H}}$  is given by the curve (Fig. 1).

This curve clearly shows that the most efficient method of obtaining great speeds is to attain great altitudes, as an increase of speed obtained through altitude does not mean an increase of landing speed.

For example, an aeroplane at 80,000 feet must go five times as fast as at ground level. The HP necessary for level flight must also be five times as great, so also must the airscrew revolutions.

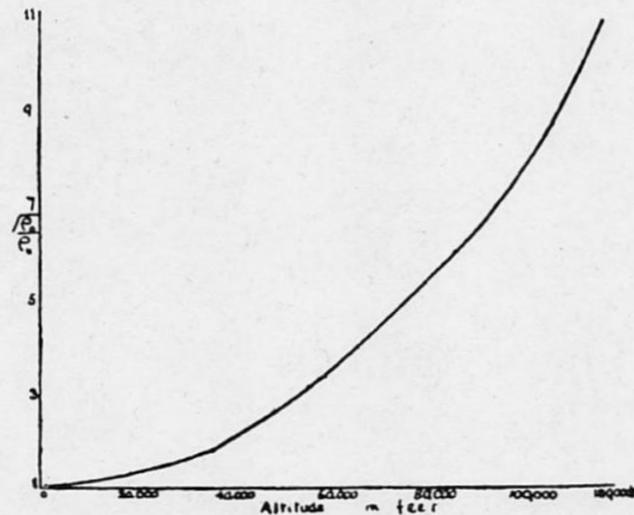


Figure 1

Example :—

Aircraft weight 2,000 lbs fully loaded.

Overall L/D of 10.

Air speed 60 mph at ground level.

Drag will be  $\frac{2,000}{10} = 200$  lbs.

Speed is 60 mph = 88 fs.

∴ HP for level flight =  $\frac{88 \times 200}{550} = 32$ .

At 80,000 feet this machine would fly at 300 mph for the same incidence and would require 160 HP for level flight.

The reasons why we cannot yet reach these altitudes are :—

(1) The engine speed is limited, and thus the only method of obtaining the extra airscrew speed would be by gears.

(2) The tip speed of an airscrew is given by  $\frac{V}{P} \times \pi D$ , where V = velocity of aeroplane in ft / sec, P is practical pitch of air-screw in feet, D is airscrew diameter in feet. It has been found by wind channel research that the efficiency of an airscrew falls off as the tip speed approaches

1,100 fs, therefore for great speeds  $\frac{P}{D}$  must be greater than one, and efficiency falls off for increasing values of  $\frac{P}{D}$ .

(3) The present type of aero engine depends for its power on the weight of mixture it takes into its cylinders per unit time, and as practical limitations prevent the increasing of revolutions as the density of the atmosphere decreases, a supercharger must be used which will supercharge the air to ground level density to maintain full power. A supercharger which will cope with the rarified atmosphere of great altitudes without absorbing much power has not yet been devised.

Even if winds do exist at these altitudes, their effect on aircraft would be very much less than at ground level. For instance, a 100 mph wind against a machine travelling at 300 mph at 80,000 feet would have the same effect as a 20 mph wind against the same machine doing 60 mph at ground level.

If such advantages are to be attained by high altitude flight, how are we going to overcome the difficulties which prevent it? The solution seems to me to be the development of a more suitable power unit.

We have heard much recently about the rocket-driven car, and of proposals for an aeroplane to be driven on the rocket principle. The principle is this :—If gases be ejected from rest, under pressure in a chamber, through a nozzle, there is a reaction equal and opposite to the force giving the gas its kinetic energy in the nozzle. Now suppose W lbs of gas per second pass through nozzle with a final velocity V fs. Then the force exerted on the gas, and therefore the reaction

=  $\frac{W}{g} V$  lbs. The kinetic energy per second given to gas by heating agent =  $\frac{W}{2g} V^2$  ft lbs — ie,

power given to gas =  $\frac{W}{2g} V^2$  ft lbs / sec. Now if the vehicle being driven in this manner has a velocity v.f.s. in the direction of the reaction, then the power for driving

= Reaction  $\times v$  ft. lbs / sec =  $\frac{W}{g} Vv$  ft lbs per sec.

=  $\frac{W}{g} Vv$  ft lbs per sec.

Efficiency =  $\frac{\text{Output}}{\text{Input}} = \frac{W}{g} Vv \div \frac{W}{2g} V^2 = \frac{2v}{V}$

Now suppose we want a thrust of 200 lbs and we can at most pass 1 lb of gas per second through the nozzle.

Then  $200 = \frac{W}{g} V = \frac{1}{32} V$

∴ Velocity of gas = 6,400 fs

and the efficiency of the "engine"

=  $\frac{2v}{6,400} = \frac{v}{3,200}$

where vfs is the velocity of the object being propelled. Thus in this particular case, we should require 1 lb of rocket mixture for every second of flight, and even if the velocity were as great as 300 mph — ie, 440 fs — efficiency would only be  $\frac{440}{3,200} = 13.7\%$ .

The rocket principle is obviously impracticable unless one applies it to a rotating nozzle where high linear speeds are possible; then one is, of course, approaching the principle of the turbine, which I now propose to discuss.

# January 1970 - Whittle Article (1c)

The steam turbine is the most efficient prime mover in common use. It has a high thermal efficiency compared with the aero engine and is a smoother running machine. Of course, a steam turbine is out of the question for aircraft owing to the enormous weight, but there seems no reason why an air turbine should not be developed, with petrol or crude oil as the heating agent. In the case of an air turbine the heating agent may mix directly with the working agent and thus exhaust via the nozzles. There being no heat wasted in flue gases, an air turbine should have a greater thermal efficiency than a steam turbine.

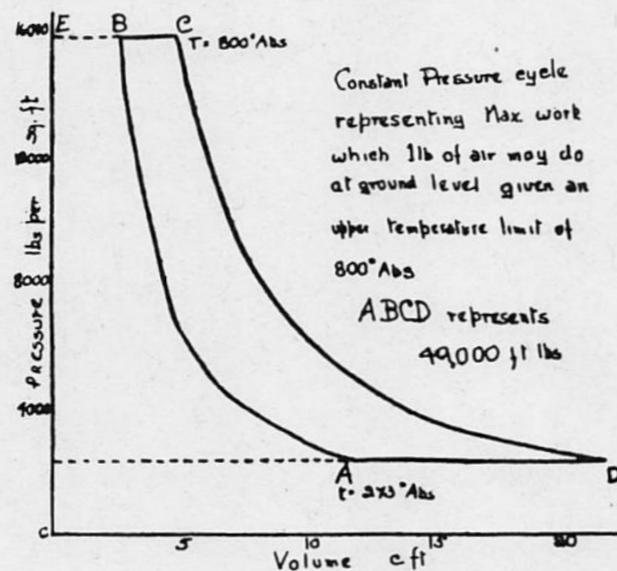


Figure 2

The cycle is shown in the two examples, Figs 2 and 3, which are actual constant pressure cycles for 1 lb of air at ground level (Fig 2) and at 115,000 feet (Fig 3).

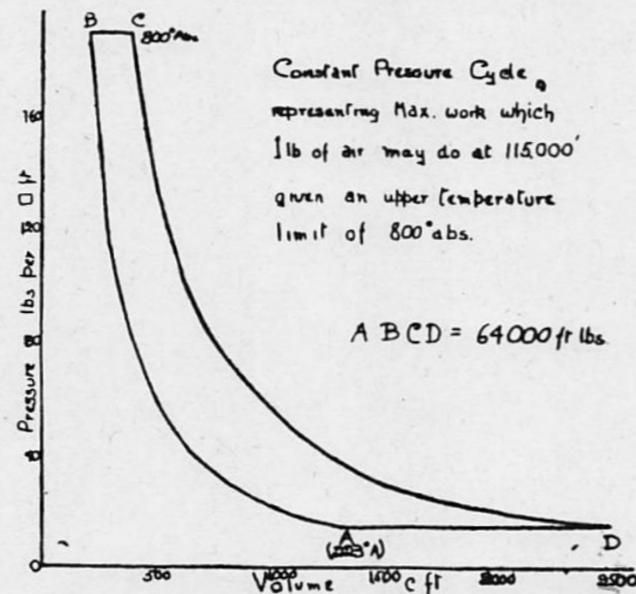


Figure 3

Air is compressed adiabatically AB. It then passes into a heating chamber and is heated at constant pressure BC. It then passes through the nozzles, expanding adiabatically CD, and finally cools at atmospheric pressure outside the engine DA.

The efficiency is given by  $\eta = 1 - \frac{1}{R^{\gamma-1}}$ , where R is the compression ratio.

The velocity of the gas at the nozzles, on which depends the most efficient velocity of the turbine rotor [the most efficient velocity of the turbine blades =  $\frac{1}{2} V \cos \alpha$ , where V is velocity of gas at nozzle, and  $\alpha$  is the angle that the axis of the nozzle makes with the rotor] is such that the kinetic energy of the gas equals the area ECDF (Fig. 2); thus the power of the turbine is not dependent on the rpm.

The power is given in the particular cases shown by

$$\text{IHP} = W \times \text{area ABCD} \div 550,$$

where W is the weight of air undergoing the cycle per second.

The maximum work which 1 lb of air may be made to do is only limited by the maximum temperature which the materials of the heating chamber will stand and the temperature of the atmosphere.

Maximum work =  $336 (\sqrt{T} - \sqrt{t})^2$ , where T is the maximum temperature (absolute) and t is the atmospheric temperature (absolute).

The idea as a whole is very similar to the steam turbine, the differences being that air is pumped adiabatically into a heating chamber, where it mingles with a burnt petrol-air mixture instead of water being boiled. As far as the nozzles and rotor are concerned, such an engine would be similar to the steam turbine.

The advantages of such a power unit may be stated as follows:—

- (1) The only limit to the compression ratio is the maximum temperature which the heating chamber may stand.
- (2) Power is not dependent on r.p.m., as in the case of the petrol engine.
- (3) The work which may be done by 1 lb of air increases with altitude, and partly compensates for the smaller quantity of air available.
- (4) Supercharging does not appear to be necessary.
- (5) Rotors of different diameters may be used to act as gearing.

The main disadvantage as far as air work is concerned is the gyroscopic effect of the rotors, but on reviewing the points for and against it seems as though the air turbine is the aero engine of the future.

# January 1970 - Whittle Article (1d)

## COMMENT ON SPECULATIONS OF 1928

by AIR COMMODORE SIR FRANK WHITTLE, KBE, CB, MA, ScD, FRS, C.Eng, RAF (Ret'd)

The Editor has asked me to agree to the re-publication of 'Speculation' which appeared in the College Magazine for the autumn of 1928 shortly after I had graduated from the College. He also asked me to write a similar article giving my present views about the future. However, I felt obliged to excuse myself from the latter on the ground that, though I have kept in general touch with aeronautical engineering over the past few years, I have been mainly concerned with oil well engineering, and I would need to do a lot of brushing up to attempt such a task. Moreover, the thought was in my mind that one can stick one's neck out a long way as a Flight Cadet aged 21 and get away with it, but I cannot do that today with impunity. Inter alia, there is too big a risk of inadvertently forecasting things which may already be on the drawing board and under security wraps. That could lead to awkward questions as many would assume that I am 'in the know' when, in fact, I am not. I have run into this difficulty in the past. For example, in 1943 I wrote a paper on probable developments in submarine design which was submitted to the Admiralty. A few years later (long after the war) I requested permission to publish. This permission was granted but only subject to important deletions, because I was rather too close to secret work then in progress. However, I agreed to the re-publication of 'Speculation' and to write this commentary on it.

I fear it was a very amateur effort, but I suppose it has some historical value because — so far as I recall — it was the first article on a technical subject by me to be published. It was a condensation of part of my fourth term thesis "Future Developments in Aircraft Design."

Unfortunately, it was marred by printing errors to such a degree that it was probably only comprehensible to anyone so familiar with aerodynamic and thermodynamic theory that the mis-prints would have been obvious. The proofs were never submitted to me for correction, so I cannot wholly be blamed for the apparent errors though, undoubtedly, my handwriting was largely at fault. Generally speaking, the errors took the form of the Greek letter 'rho' appearing as 'P'; the Greek letter 'gamma' appearing as 'Y'; indices appearing as coefficients; + signs instead of the word 'and'; 9 for the symbol 'g' etc. eg

$$\sqrt{\frac{\rho_0}{\rho_H}} \text{ appeared as } \sqrt{\frac{P_0}{PH}}$$

As may be seen, I looked into the possibilities of rocket propulsion and into propellers powered by internal combustion turbines — it had not then occurred to me that the gas turbine was the best way of producing a propelling jet (for aircraft propulsion at least). The penny dropped just over a year later, by which time I had raised my sights to speeds of the order of 500 mph.

Though I did not know it at the time, the first formula in the article (for range) was a form of the Breguet Equation (the figure 2,800 was the calorific value of petrol in foot pounds per pound divided by 5,280 — to convert feet into miles). It can be applied to jet aircraft by the substitution of the appropriate efficiencies.<sup>1</sup> The formula tends to ignore climb and descent — I

<sup>1</sup> It is now often written in the form

$R = \frac{V}{f} \frac{L}{D} \text{Log}_e \frac{W_1}{W_2}$  where V is flight speed (mph if R is in miles or knots if R is nautical miles); f is specific fuel consumption in lbs/hr/lb of thrust; W<sub>1</sub> is all up weight at beginning of cruise and W<sub>2</sub> is all up weight at end of cruise.

probably assumed that the extra fuel required for climb was compensated for by fuel saved on descent. It also requires that the flight condition is at constant lift/drag ratio ie, at constant incidence, which implies a gradual climb as the weight is reduced by fuel consumption. I did not then foresee that traffic control requirements would usually prevent adherence to this optimum flight plan. (With jet aircraft one must fly at a speed somewhat higher than that for maximum L/D because as the thrust of a jet engine varies only slightly with speed at cruising speeds any attempt to fly at maximum L/D — ie, minimum drag — would mean that the slightest deceleration would result in the drag becoming greater than thrust, thus causing further deceleration)<sup>2</sup>

My views about conditions in the stratosphere were distinctly optimistic but I could not know this as no-one had ever been there nor, so far as I knew, had anyone devised any means for regular exploration of the stratosphere. Such things as jet streams had yet to be discovered as also the fact that the tropopause is very much higher in the lower latitudes (I have seen cumulonimbus towering many thousands of feet above when flying across the Caribbean at 35,000 feet).

The discussion of propulsion by rocket leaves a great deal to be desired, but I was, of course, thinking only in terms of aircraft propulsion. (I think I would have been as disbelieving as anyone if someone had suggested that man would set foot on the moon within 31 years). I remember being very uneasy at the expression I derived for the efficiency of rocket propulsion because of the implication that if the flight speed became more than half the jet velocity, the efficiency would exceed 100% which is improbable to say the least of it. However, this condition would have meant flight speeds more than seven times greater than the 300 mph I was considering. I must have decided not to worry about such a seemingly remote possibility. One of the things I did not take into account was the work done in imparting kinetic energy to the vehicle in addition to overcoming drag. A satisfactory definition of the efficiency of rocket propulsion still seems to me to be a somewhat elusive thing.

The discussion of the gas turbine in the latter part of the paper is, I fear, very amateurish. It is evident that I was thinking only in terms of what was then known as the simple impulse turbine of the de Laval type and that I was still far from being familiar with turbine theory. The most serious defect of this section, is that I evidently assumed that the losses in the processes of compression and expansion would be negligible whereas, as I came to realise shortly after, compressor and turbine efficiencies were all important. The low values then usual for rotary machinery of this type was, coupled with the lack of materials capable of withstanding high stresses at high temperatures, the main stumbling block in the several unsuccessful attempts to develop the gas turbine in the early years of the century.

On reflecting on this serious defect in my argument, my embarrassment is somewhat mitigated by the knowledge that I wrote a paper entitled "The Case for the Gas Turbine" while I was a floatplane and catapult experimental test pilot at the Marine Aircraft Experimental Establishment, Felixstowe between January 1931 and July 1932. This paper was never published but, though I had still to receive my engineering training at Henlow and Cambridge, it shows that I

<sup>2</sup> When I embarked on the task of finding a range formula I fully expected to find that great increases of range could be obtained by flight at great altitudes and my disappointment was great when I was forced to accept that maximum still air range was independent of height.

# January 1970 - Whittle Article (1e)

had greatly advanced in my knowledge of gas turbine theory and had acquired a much more realistic approach and become well aware of the importance of component efficiencies and the need for suitable turbine blade materials. By that time I was, of course, concentrating on the jet engine application of the gas turbine.

The advantages as listed at the end of 'Speculation' also show that my ideas were still somewhat nebulous. The first would have been better stated as "The limiting pressure ratio is governed by the component efficiencies and the maximum cycle temperature which available materials will permit." Item (2) is wrong. I was evidently thinking of steam turbine characteristics. Even so it should have read "Power is not as dependent on rpm . . . .". However, as everyone now knows, when the compressor is driven by the turbine, power is in fact far more sensitive to rpm than in the case of the piston engine. (The static thrust of our first flight engine — the W1 — was 860 lbs at 16,000 rpm, 1,000 lbs at 17,000 rpm and 1,240 lbs at the full design speed of 17,750 rpm.)

Item (3) was (and is) quite sound and becomes even more true when compressor and turbine losses are taken into account. Item (4) also proved to be sound in the event, but I cannot remember what I had in mind when I included (5). I am also puzzled by the fact that I did not include the advantages of low weight, absence of vibration, insensitivity to fuel type etc. However, a year or so later I was in the habit of including these.

The formula given for the maximum work per lb of air per second for a constant pressure cycle (the last formula in the article) looked very unfamiliar and I thought that there must be quite a serious misprint but on checking I found that, except that the coefficient 336 (the specific heat of air at constant pressure in ft lbs per lb) appeared as 356 it was correct for the ideal cycle. In later years I would have preferred it in the form

$$w_{\max} = K_p T_o \left[ \sqrt{\frac{T_m}{T_o}} - 1 \right]^2 \text{ where } w \text{ is the work/lb of air/sec, } K_p \text{ is the}$$

specific heat at constant pressure,  $T_m$  is highest cycle temperature and  $T_o$  is lowest cycle temperature (ie atmospheric static temperature in an open cycle engine).

A particularly interesting thing about this formula is that it indicated the beginning of a very useful line of reasoning. As time passed I acquired the habit of dealing with thermal cycles almost entirely in terms of absolute temperatures, temperature ratios and pressure ratios. Included in this system was the practice of thinking of velocities in terms of temperature equivalents and vice versa. (The conversion is given by  $V^2 = 2 g K_p \Delta T$  where  $\Delta T$  is the temperature change corresponding to velocity  $V$ . It happens that  $\sqrt{2 g K_p}$  has the same digits as the factor for conversion of mph into fps — 1.47 — hence the useful rule that kinetic temperature rise in  $^{\circ}\text{C}$  is equivalent to the square of the speed in hundreds of miles per hour, eg, if air travelling at 500 mph is brought to rest the temperature rise is  $25^{\circ}\text{C}$ ; for 1,000 mph it is  $100^{\circ}\text{C}$  and so on—hence the problems of kinetic heating which arise at very high Mach numbers).

In detail design one has to allow for a number of minor factors such as increase of specific heat with temperature, the fact that the mass flow in expansion is greater than the mass flow in compression due to the added fuel mass etc., but these secondary 'adjustments' can be ignored for the purpose of preliminary design and especially for comparative purposes when seeking the optimum cycle for any particular application. With this system it is possible to 'work round' a jet engine cycle in a matter of three or four minutes after a little practice.

When compressor and turbine losses are taken into account the above formula for  $w_{\max}$  becomes modified to

$$w_{\max} = K_p T_o \frac{T_o}{\eta_c} \left[ \sqrt{\eta_c \eta_t \frac{T_m}{T_o}} - 1 \right]^2 \text{ where } \eta_c \text{ is compression efficiency}$$

and  $\eta_t$  is expansion efficiency. This condition occurs at a temperature ratio  $r = \sqrt{\eta_c \eta_t \frac{T_m}{T_o}}$

eg, for standard sea level conditions ( $T_o = 288^{\circ}\text{K}$ ) with  $T_m = 1100^{\circ}\text{K}$ ,  $\eta_c = 0.86$ ,  $\eta_t = 0.90$  the value of  $r$  for  $w_{\max}$  is 1.72 which gives  $w_{\max} = 58,200$  ft lbs/lb or 106 hp/lb/sec. Thus the mass flow of air for 10,000 hp would have to be 94.3 lbs/sec.

Unfortunately, the temperature ratio for highest overall efficiency is substantially higher (about 2.1) so that peak efficiency can only be obtained at the sacrifice of output per unit flow, and vice versa.

In practice  $\eta_c$  decreases as temperature ratio (and therefore pressure ratio) is increased but  $\eta_t$  increases. Both effects are due to the conversion of losses into heat during the compression and expansion processes.

Well! there is my apologia. If I did drop a few bricks, I can claim that I picked them up again a short time later and learned quite a lot in doing so.

When I look back over the years I am struck by my own relative pessimism at a time when others thought me a wild optimist. The power, size, reliability and performance of jet aircraft have gone far beyond anything I ever predicted. I was, however, usually over optimistic about time and cost, though, in my opinion, my estimates of time **could** have been achieved. For example, there was no serious obstacle to the introduction of the large by-pass ratio turbofan about, say, 1946 or the successful achievement of supersonic flight at about the same time. Unhappily, the contracts for our large by-pass ratio engine (the LR1) and for the Miles M52 experimental supersonic aircraft were cancelled.

# 1986-1987 - Times Tribute to a Jet-age Genius (2a)

Air Commodore Sir Frank Whittle OM KBE  
CB RDI FRS FEng MA(Cantab) RAF Retd



*Sir Frank signs the visitors' book in College Hall Officers' Mess.*

The following tribute to Sir Frank Whittle appeared in *The Times* on 12 June 1986 when he visited London to receive from the Queen the highest honour in her gift, the Order of Merit. It is reproduced here with the kind permission of the Editor of *The Times* as a permanent record for the benefit of all Cranwellians.

## **JUST REWARD FOR THE JET-AGE GENIUS**

As he sits in his Piccadilly club you could walk straight past him, an unknown man. He is crisp, quiet and wary. His petite American wife, Lady "Tommie" Whittle, walks in from a shopping trip in the London rain. They exchange quiet greetings, just two visitors to London.

But tomorrow Sir Frank Whittle, the jet's inventor, will meet the Prime Minister at 10 Downing Street. Eleven days later he is due at Buckingham Palace to receive from the

Queen the highest order in her gift, the Order of Merit.

Later that day he will also attend the royal opening of the vast new Queen Elizabeth II Conference Centre opposite Westminster Abbey. One of the two main rooms is named after him, the other after Sir Alexander Fleming, discoverer of penicillin. "At least two of us are still alive", Sir Frank joked. A genius has come home.

Now 79 and living in the United States, Sir Frank invented the jet between the ages of 18 and 23. He has lived to see it create the

# 1986-1987 - Times Tribute to a Jet-age Genius (2b)

phenomenon of mass air travel – he flew in by Concorde, “the highest achievement so far” – as well as revolutionize military aviation.

## FIFTY YEARS AFTER SIGNING THE ORDER FOR THE FIRST JET ENGINE, SIR FRANK WHITTLE RECEIVES THE ORDER OF MERIT

It was 50 years ago this week that, as a young RAF flight lieutenant, he signed the order for the world’s first jet engine. It was one of the most significant orders in the history of engineering. If Whittle’s engine had been pursued energetically and had been ready for the air three years later in 1939, as it could have been, it is certain that the Germans would not have dared to move against Britain and France until the Luftwaffe had at least caught up. How did we miss the chance?

Whittle had his early ideas as an RAF Cranwell College cadet, a working-class boy who gained entrance as an apprentice after a friendly drill sergeant had given him an exercise and diet chart so that his height could be stretched to the 5ft 3in minimum.

First he thought of a propelling jet created by a fan driven by a piston engine. Then one day towards the end of 1929 he saw in a flash that he should swap the piston engine for a turbine to drive a compressor, which would mean just one moving part instead of hundreds. He was just 22 at the time.

Pilot Officer Whittle was summoned to the Air Ministry’s scientific research laboratory in South Kensington, where the director, Dr A A Griffith, told him that his assumptions were over-optimistic. Griffith did *not* reveal that he had been working on a project of his own for some years in which the turbine was to be used to drive a propeller. Whittle returned to his squadron.

All the same, he filed his patents in 1930. The Air Ministry, which rejected his ideas, said there was no call for secrecy. As a result the patents were published throughout the world, a marvellous example of officialdom giving away secrets while keeping rubbish under wraps.

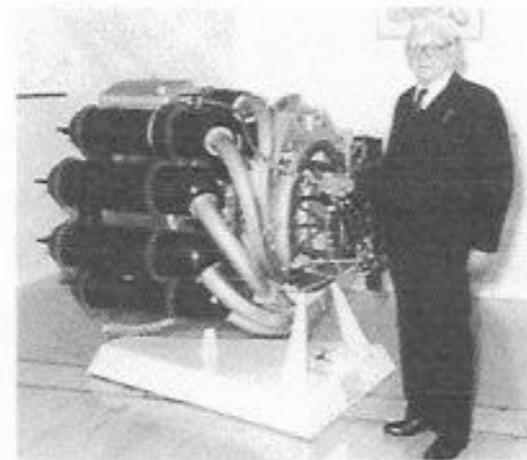
Throughout the early 1930s Whittle pursued his project in the face of indifference from engineering firms. The Air Ministry sent him to Cambridge University in 1934 to

read engineering: “I have always acknowledged my debt to the RAF for my education. I had left school at 15.”

## GERMAN RIVAL HAD ALL THAT HE NEEDED

Whittle achieved a First just as he was setting up his own company, Power Jets. With two friends, former RAF officers, he had persuaded a merchant bank to put up £2,000. The Air Ministry allowed him to work as chief engineer and technical consultant to his company for five years “provided always that the work shall not in any one week exceed a total of six hours”.

Not until 1939 did the Air Ministry concede that his tiny experimental engine was the basis of a power plant that could drive aeroplanes to unparalleled heights and speeds. By that time about £20,000 had been spent while Whittle and a devoted but slender team gave not six hours, but seven long days a week, in ramshackle surroundings, sometimes forced to use reclaimed scrap metal.



*Sir Frank with the Whittle Engine in Trenchard Hall.*

In contrast, Hans von Ohain, Whittle’s German rival, had obtained from the planemaker Ernst Heinkel all the resources he needed to build a jet plane, which flew in August 1939, a world first and nearly two years ahead of Whittle’s engine.

In 1940 Whitehall took over the Power Jets project. They chose the car engine division of Rover to manufacture the jet, a disastrous decision that delayed the project for two years. Not until 1943 was it given to Rolls-Royce, where it should have gone originally.

Whittle’s ultimate ambition, to manufacture his jet engines, was frustrated when the established aero-engine companies said they would not tolerate competition from a state-funded company. Rolls-Royce led the pack. Power Jets, which founded an industry by selflessly giving its work to its competitors throughout the war, was ruthlessly closed by the coalition Government.

## WHITTLE ALSO FOUNDED THE US JET INDUSTRY

Today, Whittle, who lives outside Baltimore, denies bitterness, although he agrees: “We were dealt with harshly. I was awarded

£100,000 and given a knighthood, but I felt that the rest of the team should also have been awarded something.”

He never again worked on aero-engines, although his thinking was ahead of the inexperienced designers who led Britain into the peacetime jet age: “I could have contributed more. In 1936 I patented the by-pass engine, which came into service on airlines only in the 1960s. I do not know why we were treated so ruthlessly.” This turbo-fan engine became an American innovation at that time. Whittle had founded their industry too, when one of his engines was flown across the Atlantic during the war.

With the OM, Britain must be paying its last tribute to a genius who served his country better than it served him.

Glyn Jones

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*The first British jet aeroplane, the Gloster Whittle E28/39.*

# 1973 - They Also Serve.....(2a)

## *"The Cranwell I have known"*

AIR COMMODORE C E P SUTTLE OBE BSC FRCO



My knowledge of Cranwell dates back to 1935 when I took up my first appointment as a Civilian Education Officer in the Royal Air Force Education Branch. Time, like distance, lends enchantment but it also tends to blur the memory and to some extent has no doubt coloured these recollections.

Cranwell in those days embraced not only flight cadet training but also a very substantial volume of airmen training. The original Electrical and Wireless School at Flowerdown, near Winchester had not long been moved

here where the instruction of apprentices, boy entrants and airmen in the various trades was given in hutted accommodation. The road from Cranwell village to the camp was delineated by a succession of small outstations at regular intervals in which the wireless operators under training practised communication.

A branch railway line between Sleaford and Cranwell terminating behind the main guard-room which had been used to convey personnel and equipment had just been closed,

foreshadowing the Beeching closures to follow. There is a story of one newly arrived contingent of Boy entrants who, stepping off this train, were ordered by a Flight Sergeant to fall in in a column of 4 ranks. He then ordered the Welshmen to take one pace forward, which they did with some diffidence. He then announced that he hated Welshmen and that they had better watch out! There was no possibility of a redress through a Race Relations Board in those days! Mr Robinson's Post Office was there as now, a familiar landmark, as was Marshall's Garage, which was located roughly opposite to the present Cranwell Avenue NAAFI and did a roaring trade selling petrol (1/4d per gallon), cars and undertaking repairs and maintenance.

The years 1935 to 1937 were landmarks in the life of the College. The King's Medal and Prince of Wales Cap had just been inaugurated. The new Station Headquarters building had been recently completed in solid architectural style; however in its early days the Wing Commander Admin found his in-tray unexpectedly filled one morning by a visitor who literally dropped in through the ceiling! In 1935 Flight Lieutenant W H Kyel captained the Command cricket team and AC1 Shaw, T E visited the College; in this year a De-Luxe Ford Saloon cost basically £135, or £155 with all the trimmings — about half of my yearly salary at that time!; the tax was £7-10-0; a Gieves shirt cost 14/6d! 1936 marked the arrival of Squadron Leader H T Lydford AFC as CFI and Flight Lieutenant H W Sweeney ran in the Olympic Team; a Fete and Torch-light Tattoo in which the participants were mainly Electrical and Wireless School personnel was mounted in the area of the present stadium and swimming bath, and realised £250 towards the cost of providing a Women's Social Club hut, a project dear to the heart of the wife of the CO of the school, Group Captain H Gordon-Dean AFC. In 1937 Squadron Leader F R D Swain, who had recently achieved a height record of 9½ miles, was appointed OC Advanced Training Squadron and Flight Lieutenant F Whittle got a First in the Natural Science Tripos at Cambridge; another Tattoo was also mounted in this year.

# 1973 - They Also Serve.....(2b)

Hair had to be kept short in those days and haircutting in working hours was deprecated. One airman was summoned before his CO for persistently absents himself from duty for a haircut:

CO: Why are you always having your hair cut in Service time?

Def: Well, Sir, it grows in Service time.

CO: It didn't all grow in Service time.

Def: I'm not having it all cut off, Sir!

My work involved the teaching of electrical and radio principles, mathematics and some English to airmen under training as Wireless Operators. The year's course included learning morse transmission and reception to 25 words per minute and a period of synthetic training in the outstations to which I have already referred. My secondary occupations were running the church choir, a male voice choir and playing the harmonium in the old St Christopher Chapel. My only claim to fame in the Royal Air Force is the large number of hours I must have amassed playing harmoniums in Royal Air Force Chapels up and down the country and abroad.

Much of my musical activity was undertaken in collaboration with the Director of Music, Warrant Officer A E "George" Sims, one of the great characters in the Royal Air Force and the composer of fine marches, among much other music, which are firmly established in the major Cranwell ceremonies. We all reckoned that he must have been one of the richest men on the station as he drove around in a Lanchester car — fluid flywheel and all that — which was quite something in the 1935-7 era.

Stories about him are legion and include one concerning one of his bandsmen brought before him on a charge of being drunk.

D of Mus: How much did you have to drink?

Musician: A pint of cider, Sir.

D of Mus: Do you mean to tell me that you can get drunk on a pint of cider.

Musician: Yes, Sir.

D of Mus: Then you are a better man than I am — Case Dismissed.

George Sims later became the Organising Director of Music and did so much to enhance the prestige of Royal Air Force military music and the career structure of his musicians.

Radio entertainment in those days was somewhat limited and TV non-existent. Consequently a good deal of effort went into providing entertainment on the Camp. There was a flourishing YMCA in a building near the present Sergeants' Mess in which Mr Chorley gave masterly performances of puppetry, monologues and drama of all kinds. The cinema was run by the Station Warrant Officer, Warrant Officer 'Pecker' Smith; and enjoyed good support! In addition, every Sunday night a concert was staged in the cinema with programmes made up from local talent. The number of personnel was so great that there was never any difficulty in arranging a Welsh, Scottish or Irish night. At each concert there was a 'Surprise Item'; on one of these I found myself accompanying what in those days would be described as a somewhat daringly-clothed female singer (well-clothed by modern standards) who sang: "I'm in a dancing mood". This is something I clearly remember! At the other end of the scale, the late Padre Leslie Wright, who was an assistant Chaplain here, and greatly loved, and who was destined to become Chaplain-in-Chief, spoke very simply about his conversion to Christianity; the light-hearted audience who a few minutes before had been indulging in lusty Community singing listened with deep intent; it left a lasting impression on me.

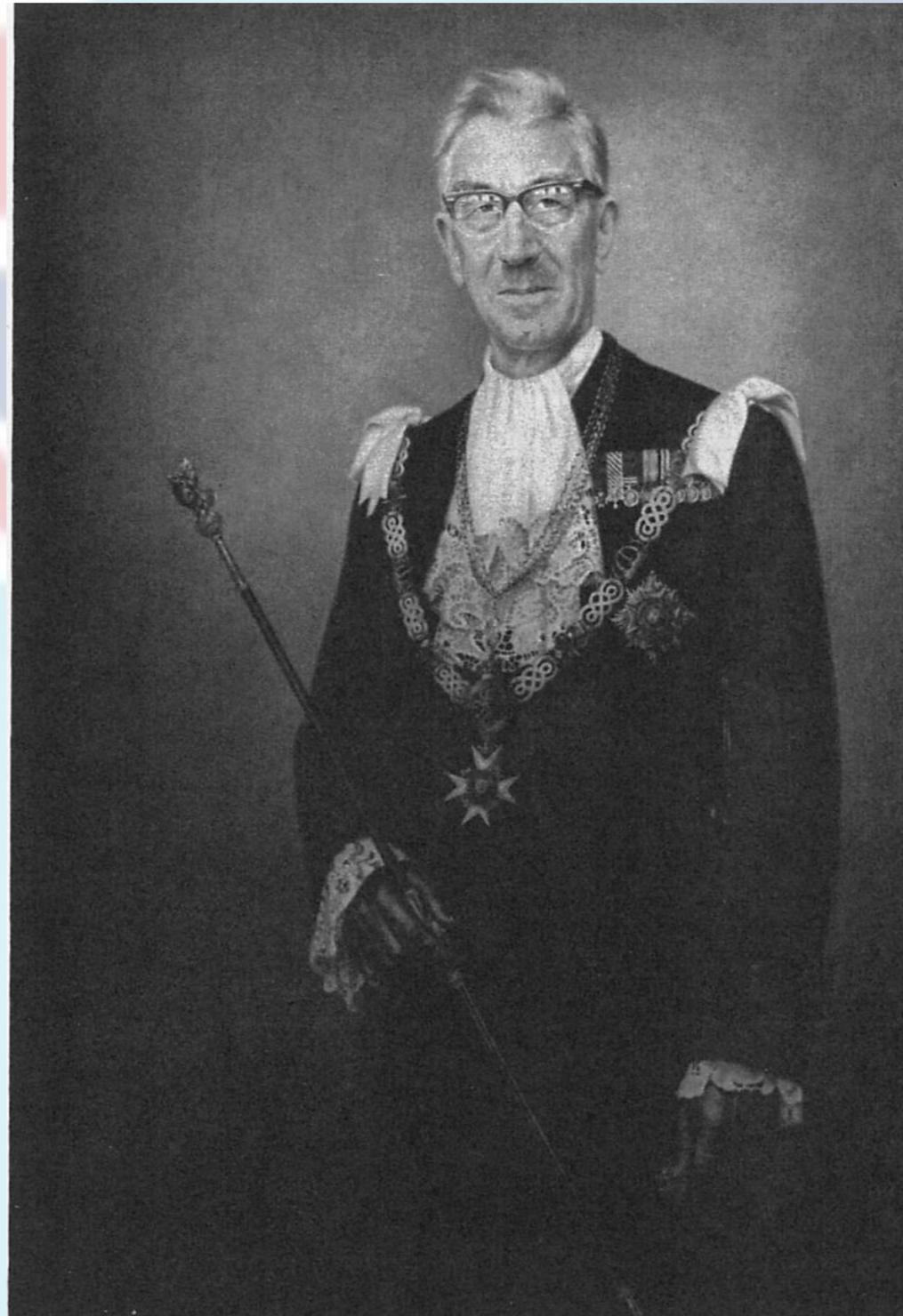
I left Cranwell at the end of 1937 and was not to return until December 1965 when I moved up with the Royal Air Force Technical College from Henlow on its merger with Cranwell. All the apprentice, boy entrants and airmen training had now gone along with their hatted instructional accommodation. The space left had been partly landscaped and partly used for the new buildings provided for engineer training. The years between now and then have been years of upheaval and change as the policy for the future of the College has evolved. Among the major events have been the opening of Trenchard Hall by The Right Honourable, The Viscount Trenchard of Wolfeton MC, the son of the first Chief of

Air Staff; the visit of HM The Queen and Prince Phillip in 1970 on the occasion of the 50th anniversary of the founding of the College and the arrival of HRH Prince Charles for a period of flying training in 1971. During the same period came the proposal to establish a Royal Defence College for all 3 Services which, had it materialised, would have had major repercussions on the then Department of Cadets. This was followed by the inauguration of the Graduate Entry Scheme which was to put to an end some 53 years of Flight Cadet Training, some 13 years of engineering degree training, result in an all-graduate population of College Hall and bring the control of all university air squadron activities under the aegis of Cranwell.

Further changes are afoot — the advent of the College of Air Warfare and the transfer of some professional training from Upwood with the consequent redeployment of various major training activities at the College in order to provide the space required — in a climate of stringent economy of resources of all kinds. It is all very different from the relative calm and flying club atmosphere of my first tour here in the 30's. However, since those days the rapid technological developments and world-wide economic problems have forced the pace of change in order that the College may continue to meet Lord Trenchard's declared objective when he founded it in 1970 "to provide the Service with officers of character and ability whose education and Service training will enable them to develop their powers and faculties to meet the demands of the highest ranks"; and his direction to the first-staff course at Andover 50 years ago "Remember the one thing to which you must apply your thoughts and brains is the expansion of the power of material and personnel without increasing either".

I count it a great privilege to have had the opportunity of spending so many years of my Service at this unique, prestigious focal point of Royal Air Force officer training and to have been able to make some small contribution to its life and work.

# December 1970 - ACM Sir George Mills (1)



**AIR CHIEF MARSHAL SIR GEORGE MILLS, GCB, DFC,  
Gentleman Usher of the Black Rod.**  
*(after the portrait now hanging in College Hall).*

# December 1970 - ACM Sir George Mills (2)

## CRANWELL CADET - 1920

by AIR CHIEF MARSHAL SIR GEORGE MILLS, GCB, DFC

When the Royal Air Force (Cadet) College opened on 5 February 1920, there were fifty of us Cadets. Seventeen were from the Navy, two Sub-Lieutenants and fifteen Midshipmen. They wore uniform with the two war ribbons. The rest, the Schools Entry, wore suits and bowler hats and that is how we paraded till our uniforms were ready. One character did appear once in breeches, stockings, trilby hat and gauntlet gloves but not for long.

The Naval entry had been offered the chance of a permanent commission after a year at Cranwell. This was at a time when big cuts in naval strength were inevitable. The rest of us were to do two years. We had taken the same examination as candidates for the Army who trained at Woolwich and Sandhurst. There was a qualifying standard but beyond that it was competitive. In those days the first forty or fifty would go to Woolwich with the rest up to the required number to Sandhurst. At first our standard was low in comparison, for instance I was first for Cranwell but only forty-fourth for Woolwich. This changed very quickly.

On the other hand our medical standard was much higher and kept out several who would otherwise have qualified easily. This upset the plan of one of my friends who purposely failed the written examination so he could stay on to captain his school rugby team till Easter. He was called in to take a vacant place. Another friend benefitted too. He was late for the examination but was allowed a place on nomination by his Headmaster, only to be turned down three times with a defective eye. He did not give up, he got a list of pilots who had done well in the war with only one good eye and sent it direct to the Secretary of State with an appeal. He got in and was a first-class, natural, born pilot. The Secretary of State was Winston Churchill.

Why did we choose Cranwell? There is no single answer but there are two overriding factors. First, flying was new and had come right into the public eye during the war. Secondly, when the war ended in 1918 all

chance of learning to fly virtually ended until Cranwell opened. So some came simply to fly, others who would have chosen a Service career anyway, were able to branch into something new and others, notably the Naval term, were able to combine both with a better chance of staying in a Service. In common with Woolwich and Sandhurst we cost our parents or guardians about £125 a year. There was some reduction for sons of deceased and serving members of the forces below the rank of Group Captain. A King's Cadet, from the Boy Apprentice Schools, was free. A Prize Cadet, the first three in the entrance examination, cost only £20 or so. On the other side of the ledger, we were paid 5/- a day in our first and 10/- a day in our second year, plus 1/- a day ration money.

February 5th was a Thursday and the rest of the week was taken up with settling in, being detailed to two Squadrons and being measured for uniforms. About now too, Cadet NCO's were appointed. For the Naval Entry this was simple, they had their seniority, for us it seemed necessary to have a moustache to qualify. However it worked, and those of us with young, boyish faces were left with two carefree years as simple flight cadets.

When we began our regular work it was very disappointing to find that we would not begin pilot training till the next year. However, two periods a week were allowed for flying so it was not too bad seeing that most of us had not even sat in an aeroplane. We never averaged two flights a week, it was more like one, but the prospect kept us going.

Within a fortnight we had our first flights. It is hard to recapture the excitement, and the anxiety lest we should not like it after having set our hearts on it for so long. In fact two left very soon because they were airsick. Our flying kit was simple; helmet and goggles, a pair of thin leather gauntlets, with a sort of bag on the back which could come over the fingers, a pair of silk linings, two pairs of overalls and a huge pair of rubber overshoes we never wore except in the snow. It was a

pale blue, slightly hazy day with no cloud when I first flew. I had asked the pilot to loop and he did, but I did not see much of it because I was looking inside the cockpit and centrifugal force kept my head down. I was rather disappointed, but he did several other things and I thoroughly enjoyed it. From now on we tended to live for the next flying day and to worry lest the weather should stop us which it so often did. We enjoyed life alright, it was so much freer than school but the thought of flying again before long added greatly to our enjoyment.

We were at the West end of the camp, with our Mess opposite the present entrance to the Orange about 100 yards from the road. Our huts were to the east of it and were of black, tin-hutted construction. Next came Station HQ and the Officers' Mess as now, then the airmen's quarters and finally the East Camp where the Boys' Wing was. Practically all flying was from the south aerodrome, huge then as now. The north aerodrome was unobstructed except for a few sports grounds tucked in on its southern edge. To the north was Lighter than Air with its big airship shed unused except for storage; it stood where the officers' married quarters now stand. The Lodge was occupied, there were five other officers' married quarters to the west of our mess, and a few for airmen towards East Camp. A small railway ran from the camp to Sleaford station. We used it once or twice early on, then it seemed to revert to freight.

We lived five to a hut. One half was bedroom, with plenty of room for our five beds and chests of drawers, the other half sitting room with five tables and chairs, some easy chairs and a coal stove. There seemed to be plenty of washing and lavatory facilities. Each hut had a civilian batman who kept it clean, made the beds, did our boots and called us. We did our buttons. Some of the batmen stayed for years and were great characters. One night early on when we were in bed we heard a lot of shouting from the main camp and this went on for some time. We learnt later that some airmen had chased the Sergeant Major into the Guard Room because he was so strict. We never heard how it all ended. We had to stand to our beds for kit inspections and medical inspections. The latter came about once a term when we stood in shirts only, ready to

bare our innocence as the MO came by. Kit inspections came more frequently, always after lunch and for only two huts at a time. There was therefore enough time to borrow if necessary.

Raised and covered wooden footways connected the huts to the Mess. They did not keep out the wind or driving rain! The mess was comfortable and furnished in officers' mess style. The food was good and we had plenty. Drinks were only served at meals and beer was the only alcohol allowed except for a glass of port on Fridays for the loyal toast. This cost a shilling. We wore mess kit at least five nights a week and had a roll-call before dinner. Later when there were more of us it was easier to answer for someone who was a bit late. Our mess accounts were made up daily in a big ledger in which our pay was credited. Periodically we drew any balance due to us, or our parents had to make up any deficit. I usually had a small credit even on 5/- a day.

The parade ground which lay just behind the mess was the domain of the two Flight Sergeants, Allan of 'A' Squadron and Burdett of 'B'; and later of the famous Sergeant Major Gorwood, who did the rest of his service at Cranwell. Between them they made drill very bearable and made us quite good. They had to too because we soon became the centre of a hollow, three-sided square on the daily, colour-hoisting parade, with the Boy's Wing on one side and the rest of the station on the other. Even then we marched off to the RAF March and the 'Lincolnshire Poacher' and the sound of either, now, still takes me straight back to that parade ground. Once, on colour-hoisting, we saw an NCO discharged with ignominy. He was marched in front of us, his sentence and crime read out and his buttons and stripes ripped off. Another time a workman was working on the mast as the colour went up to the yardarm and took off his cap with a fine flourish as we presented arms. Colour-hoisting was every day except Sunday when we had Church Parade, with a keen inspection by the Assistant Commandant. It was during inspections before these daily parades that summonses to the Squadron Commander's orderly room were issued. Few can forget the refrain as the Flight Sergeant passed behind us, 'Office for you Mr so-and-so,' and 'Eyes

# December 1970 - ACM Sir George Mills (3)



*Flight Cadet G. Mills.*

front!' as 'Mr so-and-so' looked round in horror.

Our other ground subjects of course took much more time than drill but it is hard now to remember much about them except where we went and a few odd details. Engineering was simply fitting and rigging, which we did in a hangar across the road from the mess. Apart from the Gnome, Falcon and Liberty engines, fitting included metal work and making those dreadful steel cubes which got smaller and smaller as we tried to get them right. Rigging was largely a matter of getting the aeroplane symmetrical, quite an art with a structure of wooden members and bracing

wires. There was woodwork too for repairing damaged parts, and control cable splicing. We made many of the toilet-paper boxes on the camp, all with laboriously dove-tailed joints. Later, to encourage our mechanical sense, P & M motor bikes were issued to some of us. Petrol was supplied but we did the maintenance. They could be used outside the camp in certain circumstances which was useful as we were not allowed our own bikes or cars even if we could afford them. Our maintenance was rather shown up in a reliability run held towards the end of our time. Less than half completed the course in time, with many straggling home in the dark without lights. One cadet broke his leg.

Armament was taught in a building near the road to the airship shed. 20lb, 112lb and 250lb bombs were current issue and had a confusing range of fuses, detonators and exploders. For guns we had the moveable Lewis and fixed Vickers. The CC gear allowing the latter to fire through the propellor was a difficult mystery to handle.

Academic subjects like English, Science and Mathematics had a brick building near to Station HQ. We did written exams here too. The instructors were civilians and many became familiar figures to many terms, unlike the Service instructors who stayed for relatively short periods. In mathematics we got to elementary calculus, in English we could choose our own subjects for essays. This was very advanced. I remember little else except that our Squadron Commander once came to an evening class in full uniform with breeches and field boots and a civilian cap. Those were the days of field boots for Squadron Leaders and above and puttees for those below, even for flying.

In a hut near the parade ground a Flight Lieutenant with an Observer's Wing taught us Law and Air Photography. Another did wireless, where we wrestled with morse keys and headphones. There was no voice radio and the W/T operator was very much of a specialist. We wrestled with service organisation under our own officers. All I can remember is that boys in the Navy could be caned in those days.



*Tail Skid Problems.*

Airmanship and Navigation lectures came in our flying periods when weather prevented flying, which seemed much too often. They were bad days. We would march to the hangar still clinging to hope and our Cadet NCO would go in to report. Then out he would come giving the 'wash-out' signal and march us off to a nearby hut. It was hard to concentrate when you felt so disappointed. The Church, gym and swimming bath were all in hangars on the south aerodrome just east of the present ones. All three padres were great characters.

Games and exercise of all kinds were vigorously encouraged and we were expected to do something active every free afternoon. During our first year, in September, I was lucky enough to break a finger at hockey. Not only did this keep me off rifle drill and other tiresome things but left me free to hang around the hangars if anyone was flying. I got four extra passenger trips this way. But for my finger I could have been in trouble for skulking round the tarmac instead of taking exercise.

At first with so few of us, competition to get into the teams was not severe, but the arrival of new terms in September and the new year quickly altered this and standards rose fast. By the next summer we began regular fixtures with Woolwich and Sandhurst.

Riding was very much encouraged, because it developed the sensitive hands so essential in the air, where the feel of the controls meant so much. Anyone could readily get time off for hunting, but very few indeed could afford even to ride. The cadet who won the first R. M. Groves Memorial Prize for flying was one who did. I think he had ridden all his life. Beagling was encouraged but did not have the same virtue as hunting. We could get transport but not time off for it.

We had about four weeks leave at Christmas and in the Summer and about ten days at Easter. We would travel to and from Grantham in 5 ton Leyland lorries, twenty or more of

# December 1970 - ACM Sir George Mills (4)

us, all standing. A dozen or less might have a 30 cwt Crossley tender which had a bench down each side. Our leaves were entirely free of any special activities, the only snag was having no chance to fly.

We flew from the south aerodrome, the hangars being where they are now. There were no runways, parachutes or flying control. The procedure was simple. You took off and landed in your own time into wind and where it was most convenient. The pilot was responsible that all was clear ahead and that he would not obstruct anyone else already landing or taking off. A machine landing always had right of way. We always spoke of 'machines' then. All our flying was on the Mono Avro, the 504K with a 100HP Gnome Monosoupape rotary engine. With luck one could get a short flight in another type if an instructor could borrow it from a visiting pilot. I had two that way.

The Mono Avro was used in great numbers as a trainer during the war. It was very well-suited, big enough to avoid torque trouble, reasonably light on the controls and robust enough to stand a good bit of bumping about. It was good for aerobatics, 'stunting,' for beginners. Loops, half rolls, stalling turns and an occasional falling leaf and spin were our normal repertoire. She did about 70 mph level, came in at around 60 and had to be dived to 90 for a loop.

She had no inherent vices but was not easy to taxi in a wind. This prevented flying on many occasions, as did low cloud and poor visibility, since we had no radio or blind flying instruments. For intercom there were two Gosport tubes, one from instructor to pupil and vice versa. These were flexible metal voice pipes with a mouthpiece at one end. The other end connected with two earpieces in our helmets via a metal Y piece and thinner lengths of rubber tubing. They were quite effective.

The engine was a slight problem as it only ran at one speed, the throttle lever simply allowing a fine adjustment of the petrol flow to let it do so. In the air when you closed the



*Q.F.I's.*

throttle in the normal way your forward speed kept the propellor, and engine, windmilling. To start again the lever must be pushed forward to the correct setting. If the engine stopped through gliding too slowly you could start it by diving if you had enough height. For waiting on the ground and taxiing there was a blip switch in the top of the control column; this allowed the engine to be run in short bursts without upsetting the throttle setting which was critical. The engine used castor oil and used it lavishly. The smell of it and the noise of the blipping engines are quite unforgettable. They were heaven. All the same this inability to throttle back made it easy to lose your propellor on landing. This was not so bad if flying with an instructor, you just got out and swung it. You were not so popular if you were alone and someone had to come out to do it.

On the first detail for the day the machines were lined up for inspection and when the word was given our instructor led us round, with the rigger and fitter in attendance. He would check the wheels, flip a wire and tweek a control cable here and there and maybe test the tailplane for firmness; there seemed to be no set procedure and certainly no maintenance sheets to sign. When all were done we carried on flying.

Our first year we sketched villages and places and map read, while we followed the progress of the Naval term with interest and envy. They were all flying solo by the summer. That autumn the weather was very bad and

the naval term had to have preference, so we got very little flying, which was miserable. Nevertheless by Christmas we had done ten hours or so each and had got used to being in the air. Our only real excitement was when a naval cadet, Yale, had the only crash in our two years. He stalled making a forced landing, badly damaging the undercarriage and front of his Avro. He was unhurt. We saw the wreck coming in on a trailer, it was a great thrill!

When we began dual instruction in February 1921 we flew much more often, sometimes maybe three or four times in a week. It was fun but at times I thought I would never learn to land. The first of us went solo at the end of March and the rest of us over the next month or so. We had had between ten and fifteen hours instruction. I got very impatient and rather frightened as I began to feel ready to go but felt quite calm when I was sent off alone. I lost my prop just before touching down but that was forgivable on a first solo and I was not too far from the tarmac.

After this, apart from frequent short checks by our instructors, we always flew alone. We would be told what to practice and for how long; anyone who landed late when someone else was waiting was very unpopular. Very soon we added aerobatics on our own, often egged on by hearing that someone else had tried. Some were shown how by their instructors but I never was. This was in line with the Gosport doctrine that a pupil should be encouraged to find out for himself once he could fly reasonably safely. It could make you breathe a bit, making up your mind to do things, particularly for the first time! Like going up through an unbroken cloud layer; we had no blind flying aids. But the wonder of breaking out into bright blue sunshine with the dazzling white of the clouds piled up around was worth a bit of anxiety. Once I got in a panic just because I was in the air. I knew there was an eclipse but when the light went an eerie, greeny-brown, I felt I must get down. But I couldn't because my time was not up, so I went down and flew at 'nought feet' across the north aerodrome. There I saw our shadow picked out like a drawing, struts and all. Then I felt better and went back up and carried on. We never really spoke about being frightened even amongst ourselves, but no doubt most of us were from time to time. In fact it was this mixture of fright and enjoy-

ment that made flying such fun and so fascinating.

We did two cross-country flights, one to Lincoln and back and the other a triangle of 45 miles; the sight of the big airship shed was as always a great comfort. We never landed away from Cranwell except for engine failure. These were still quite frequent and had a marked effect on flying technique. In lectures we were taught always to keep a possible landing place in view and how to tell the wind at ground level. Do cows still lie down into wind? In the air every landing had to be treated as a forced landing; once you had shut off your engine that was that, it was the height of bad airmanship to use it again to drag yourself in to the desired spot. We were taught how to sideslip off height, undershooting was bad. 'No I deadly sin' was of course to turn back on take off.

Thanks to this teaching but even more so to the size of the aerodromes at Cranwell and of the fields around, Yale was the only one to come to grief in a forced landing. I do not know how many we had, but I see I had six in 1921 in thirty-four hours flying, three alone and three with my instructor. The causes are interesting. In two, one to each of us, we ran out of petrol and flew back after someone had flown out with a can or two. We had only been flying some twenty minutes at the time; normal endurance was 1½ hours or so! Once we had a broken connecting rod. When I did my first loop and 'hung' on top, the distributor wire fell out of the magneto because the split terminal was loose. I got down in a field. Another time gliding from 11,000 ft the oil congealed and I could not get the engine to turn. This was over the aerodrome. The other time involved a three-mile walk home for help, while my instructor waited with the machine. My log book gives no cause. No special notice was taken of these incidents and both times I flew out of the fields I had landed in.

We were not allowed to fly together or take passengers but shortly before we left two particular friends in our term flew with me. I had extra flying in the afternoon and picked them up and landed them again on the North aerodrome, and we got away with it. Probably others did the same but one did not talk about it.

By mid-December flying finished and exams began. We averaged about forty-five hours in

the air of which eighteen to twenty were solo and around fifteen dual. About this time too we heard that a third of those passing out would stay in UK, the rest would be posted to Egypt, including Palestine and the Sudan, India and Mesopotamia (Iraq). We were allowed to state a preference and though the overseas tour was five years I believe enough of us volunteered. We could also say what type we wanted to fly, DH9a, Bristol Fighter or, I think, Sopwith Snipe.

There must have been special parades when the Naval term passed out and when we did a year later but I cannot remember them. I can remember speeches in the gym after lunch, with prize-giving when we left. There were only three prizes then, the Sword of Honour, the Groves Memorial prize for flying and the Abdy Gerrard Fellowes for Science and Mathematics. We had passing-out Balls each year too, though I cannot recall that we were at any time told if we had passed out. That came later in letters from the Air Ministry after we had left. In the same envelope we had our posting instructions when most of us seemed to get what we had asked for. Sixteen of the original seventeen on the Naval course were commissioned and twenty-seven of the thirty-three on ours.

Those who stayed at home went to a conversion squadron but the rest of us did no more flying till we got to our overseas Commands in April. We travelled of course by troopship. In Egypt there was a full-scale flying school where they could convert, in India and Mesopotamia our squadrons had to do it. This was quite a problem for them, with us so inexperienced and facilities pretty sketchy with the one dual aircraft often un-serviceable. Moreover the squadrons were mostly quite occupied with other work, including small wars and air control operations. It was not all that easy to learn a new type in these circumstances and I know that at times I must have strained people's patience to the limit. No doubt others did too. These men had all seen war service and many did not have permanent commissions as we did, yet nothing seemed to diminish the great kindness and friendliness with which we were treated. There was none of the 'keep the new boy in his place' attitude which was quite common in the other two services. This is perhaps the warmest and deepest of the host of cheerful and happy memories I have of those early days.

# 1982 - Mr J Holt & Prodigies (1)

## OBITUARY

### MR J HOLT MBE, BEM

Those who were at the College in the 1950s will be saddened to hear of the recent death at the early age of 59 of one of Cranwell's most

legendary characters - Flight Sergeant (latterly Warrant Officer) Jack Holt. Perhaps in the whole history of Cranwell no member of its staff at any level has been so vividly

remembered. Many a current Station Commander would have sprung automatically to attention if he heard a scream of "Mr Murgatroyd"!! (if that was his name) uttered in the unique parade ground voice of Jack Holt.

Jack, who alternated between C Squadron and the Junior Entries for the 9 years following his arrival in 1952 as a 28 year old Corporal/Acting Flight Sergeant, was entirely in a class of his own as a drill instructor, so far ahead of any rival that I have never seen his standards approached. No one could look the part better - just above average height, immaculate in uniform, fierce in aspect, his prominent ginger moustache irreverently immortalised in his nickname "Bogbrush". His orders were awe-inspiring, his domination of a squad of up to 70 cadets at a time total, his correction of the minutest error of detail unerring, his grasp of humorous metaphor brilliant.

Yet Jack was far more than a mere drill

instructor. He was in his element in Junior Entries: it was he who decided and imposed the required standards of turnout and discipline. Indeed, he decided the minutiae of the Junior Cadets' lives. He made up and typed the daily orders, carried out the inspections - even ordained when cricket matches were to be played between the Junior Entry and the Sergeants' Mess. Perhaps the most important lesson he ever taught was that the highest standards can only be achieved in any activity by total effort. He gave - and got - total effort. He retired to his native Yorkshire after over 36 years service, with the MBE and the BEM, only last year.

He was, in a metaphor that those of the Cranwell generation he trained will understand, the Don Bradman of RAF NCOs: there were many other excellent individuals but he stood so far above all of them that he was completely in a class of his own. He will be very much missed.

# March 2006 - Mr J Holt & Prodigies (2)

## THE JACK HOLT MEMORIAL AWARD

*By Sqn Ldr Peter Symes RAF Retd*

In 2005 Flight Sergeant Rick Chapman was judged to meet the criteria for the award of the Jack Holt Memorial Pace Stick and cited as:

"The Senior Non Commissioned Officer engaged in Initial Officer Training who has by instruction and personal example done most to instil in the cadets the qualities needed of an Officer in the Royal Air Force. The nominees are assessed for instructor skills, personal standards, extra-curricular activity directly linked to Initial Officer Training and personal standing and influence with the cadet body".

He is shown being presented with the memorial pace stick at the Church Parade during the Old Cranwellian Association Reunion Weekend by Air Chief Marshal Sir Jock Kennedy of No 46(Flight Cadet) Entry and President of the Association.



The last report was of the inauguration of the Award in 2002 so with this fourth presentation the time is ripe for an update on the progress of the scheme.

In the interests of continuity and security in the longer term the planning committee headed by Air Chief Marshal Sir Michael Graydon of No 76 (Flight Cadet) Entry has handed over to the Old Cranwellian Association Committee the ongoing administration of the award scheme and custody of the fund. That is now a Reserve Account within the Association's assets and on its balance sheet as at 31 December 2004 it stood at £1367: the sum remaining after inauguration and subsequent presentation costs, including the bulk purchase at discount of pace sticks (of which two remain in stock), derived from 132 donations totalling £2466.

Following a reunion of the 76th in 2004 to mark the 45th anniversary of their graduation, Jeremy Price asked the 21 who mustered to subscribe money to the Fund as consideration for his production of copies of a group photograph and with £300 thus induced he went on to suggest a formal record of the Awards. The proposal was enthusiastically endorsed at the Association's AGM and a Jack Holt Memorial Award Book has been produced jointly with the Officer and Aircrew Cadet Training Unit. It will accordingly be on display in the foyer of the Unit's Headquarters day to day but transferred to the Rotunda during the Association's Reunion Weekends.

Such an eponymous record necessitates a photographic preface too but surprisingly an "at camera" picture of Jack

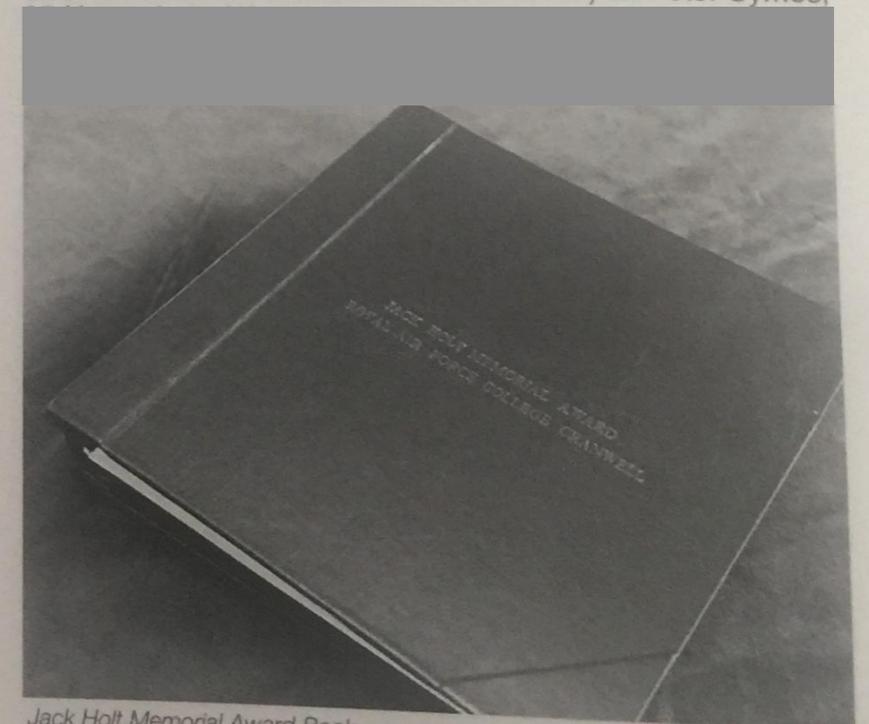
Holt, up close and on his own, has so far been impossible to find. The College archives have been thoroughly searched but surely Mrs Holt has an album many have asked? She does indeed but it was not until some 10 years after his time at the College that they were married and her photographs are of them together in social settings. On all three counts he therefore lacks that lean and hungry look which for so many of was so motivating and so memorable! Therefore the Book opens provisionally on a computerised enhancement, through the invaluable agency of Mary Guy the College Librarian cum Archivist, of a small illustration in the College Journal of him sledge hammering the opening from C into the D Wing extension in May 1960. One would hardly approach The Brush to say "cheese" except perhaps when in the Senior Entry. So if anyone in Nos 56 to 84 (Flight Cadet) Entries in C Squadron in particular, has a fairly close up photograph solely of him, it would be greatly appreciated to evaluate alongside the couple which John Hawtin of No 65 (Flight Cadet) Entry has kindly isolated by computer from informal group shots and sent from Canada.



As to the near future, only Senior Non-Commissioned Officers in the RAF Regiment have been eligible for the Award so far on account of the establishment of OACTU. However, the restructuring of the Flight System to include Flight Sergeants from any trade as Deputy Flight Commanders has opened up the field to the entire spectrum of the RAF. This is an exciting new development and is part of a major reorganisation of how we deliver Initial Officer Training.

Beyond that, the scheme as a whole will be reviewed in 2007, five years after inauguration and, from the point of view of the 76th, in the year of the 50th anniversary of their being introduced to the Royal Air Force by one Flight Sergeant Jack Holt.

(Please send any photographs, or even further donations (payable to the Old Cranwellian Association) to: Peter Symes,



*Jack Holt Memorial Award Book*

# March 2007 - Mr J Holt & Prodigies (3)

## JACK HOLT MEMORIAL AWARD

*by Squadron Leader George Formby, Officer Commanding Military Skills Squadron OACTU*

Sergeant Gareth Burton was posted to the Officer and Aircrew Cadet Training Unit where his outstanding qualities ensured he was an exceptional asset during the transition to the new Initial Officer Training course. Specially chosen to be an acting Flight Sergeant on C Squadron, he proved to be a highly professional SNCO developing an exemplary working relationship with the Squadron officers and cadets alike.

During the busy transition as the new IOT course was implemented, he was instrumental in ensuring that all drill and ceremonial training was delivered in accordance with the exacting standards demanded by the College Warrant Officer. Additionally, he successfully ensured that the department's new drill instructors all mastered the intricacies of the College drill programme very efficiently. An inspirational role model for young junior officers, he would frequently give up his time at weekends to support the training to ensure that the high standards of the RAF were maintained.

Sergeant Burton has also carried out an exceptional amount of fundraising activities. As the principal charities representative within Military Skills Squadron, he was responsible for several charity projects and also organised a charity all ranks social event for each IOT Squadron through the year. In



*Air Chief Marshal Sir Jock Kennedy presenting the Jack Holt Memorial Award to Sergeant Gareth Burton*

addition, he also represented RAFA at the London Marathon raising a significant amount of money. Sergeant Burton is a truly outstanding SNCO who exemplifies all the traits that OACTU aims to instil in its potential junior officers whilst demonstrating an outstanding level of commitment and enthusiasm for his duties at the RAF College. In recognition of his qualities Sergeant Burton was awarded the 2006 Jack Holt Memorial Award for the best performing Regiment SNCO at the Officer and Aircrew Cadet Training Unit.

# March 2011 - Mr J Holt & Prodigies (4)

## The Jack Holt Memorial Pace Stick for 2010

*The Jack Holt Memorial Award is for the SNCO engaged in Initial Officer Training who has by instruction and personal example done most to instil into the cadets the qualities needed of an officer in the RAF, the nominees are assessed for instructional skills, personal standards, extracurricular activities directly linked to Initial Officer Training and personal standing and influence with the cadet body.*

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The Jack Holt Memorial Pace Stick for 2010 is awarded to:

### **Flight Sergeant Dean Betts**

Flight Sergeant Betts' experience and effectiveness as a Dep Flt Cdr has been exemplary. His enthusiasm and innovation naturally inspire the cadets to embrace the importance of personal bearing, dress and most importantly command example. Detailed knowledge of RAF Ceremonial procedures has made him a centre of gravity for the delivery of the high level of drill standards achieved on many important official occasions, such as an extremely successful Queens Review. Cadets speak of his outstanding professionalism and fairness which is supported by a sense of infectious enjoyment and enthusiasm that encourages his students to always strive 'to be the best'.

He is extremely proactive with an abundance of capacity; examples include the setting up of the Cranwell Sprint Triathlon series over the last 2 years. Additionally, he instigated the 'inter Sqn dash challenge', that is conducted every 10 weeks and in aid of an OACTU charity. His resolute instilment of ethos and camaraderie across the entire cadet body, through competition and challenge, epitomizes the tenacity and fighting spirit we require from our current and future leaders of the Royal Air Force. A remarkable individual who is a real asset to the Royal Air Force College and indeed to the wider Royal Air Force; beyond doubt, a worthy recipient of the Jack Holt Memorial award.

*Flight Sergeant Dean Betts receives the Jack Holt Memorial Pace Stick from Sir Jock Kennedy*



# May 2012 - Mr J Holt & Prodigies (5)

## The Jack Holt Memorial Pace Stick For 2011

*The Jack Holt Memorial Award is for the Senior Non-Commissioned Officer (SNCO) engaged in Initial Officer Training who has, by instruction and personal example, done most to instil into the cadets the qualities needed of an officer in the Royal Air Force. The nominees are assessed for instructional skills, personal standards, extracurricular activities directly linked to Initial Officer Training and personal standing and influence across the entire officer cadet body.*

The Jack Holt Memorial Pace Stick for 2011 is awarded to:

### Flight Sergeant Eddie Partyka

Flight Sergeant Partyka's experience and effectiveness as a Deputy Flight Commander has been outstanding, particularly during a period of unprecedented surge in course numbers. His commitment and professionalism is of the highest standard, always motivating others - cadets and staff, alike - to 'be the best'. Flight Sergeant Partyka is selflessly committed to his work, running back-to-back courses from Main Squadron to Remedial Training. Despite this he continuously volunteers for additional duties, such as No 1 Mess House Member, introducing initiatives that have directly enhanced the quality of life for cadets during their first term of training. Flight Sergeant Partyka has utilised his glass engraving, photography and video editing skills to produce trophies

and memorabilia that have influenced the ethos and camaraderie of the cadets across OACTU. He has demonstrated excellence on C Squadron, quickly becoming the 'senior Flight Sergeant' and, on Delta Flight, greatly assisting failed cadets in achieving success through his highly effective coaching and mentoring skills. As a result he has been selected to mentor the new Flight Sergeants for the first term of the next Initial Officer Training Course. Flight Sergeant Partyka is an exemplary role model to cadets and the other OACTU staff, naturally inspiring a new generation of junior officers and instilling them with the highest sense of excellence, ethos and camaraderie.

*Flight Sergeant Eddie Partyka receives the Jack Holt Memorial Pace Stick from Sir Jock Kennedy.*



# May 2013 - Mr J Holt & Prodigies (6)

## The Jack Holt Memorial Pace Stick 2012

*The Jack Holt Memorial Pace Stick is awarded annually, to the Senior Non-Commissioned Officer (SNCO) engaged in Initial Officer Training (IOT) who has, by instruction and personal example, done the most to instil into the cadets the qualities required of an Officer in the Royal Air Force. The nominees are assessed for instructional skills, personal standards, extracurricular activities directly linked to IOT, and personal standing and influence across the entire cadet cadre.*

Flight Sergeant Richard Bromell has been a consistent and trusted stalwart to B Sqn, Officer & Aircrew Cadet Training Unit (OACTU) and the Royal Air Force during the 3 years he has been in post. He has served variously as Deputy Flight Commander and Squadron Flight Sergeant, in support of cadets at IOT. He is meticulous with his conduct and appearance, and has become the epitome of how cadets should conduct themselves in striving for the excellence the RAF demands from its entire staff.

Not only has Flight Sergeant Bromell acted as the Squadron Flight Sergeant, he also regularly assists the College Warrant Officer with the varying and lengthy drill parades and practices, normally in preparation for upcoming cadet ceremonial duties that belie RAFC Cranwell. In addition, Flight Sergeant Bromell is not averse to aiding the Force Protection Training Squadron when they have staffing issues or require his expertise. He does not consider time nor weather as a constraint to anything he undertakes; he invests his personal time coaching cadets in all conditions, where their course programme allows, thus enabling maximum learning opportunity. Furthermore, on matters such as

dress and deportment, standards and officer qualities, he excels when imparting the Ethos and Core Values that are synonymous to IOT.

His dedication to the Service is second to none, as he constantly strives to increase his situational awareness of the Royal Air Force and Force Protection matters – this ensures leadership exercises are relevant and realistic; he even role-plays when required. These regular selfless acts amplify self-efficacy, and demonstrate his drive to allow cadets a balanced transition to officer life in the Royal Air Force. His peers utilise his wealth of service knowledge as a sounding board when they need to resolve a policy issue, or require a succinct but factual answer. His firm but fair traits ensure he is also a valued role model to OACTU staff, and all who interact with him.

To conclude, Flight Sergeant Bromell is a diligent SNCO who always puts the cadets' needs first; he develops and challenges them where possible and uses every opportunity to ensure they are fully prepared for service life by imparting his experience where appropriate. He fully deserves his plaudits, and the award of the Jack Holt Memorial Pace Stick.

*Flight Sergeant Richard Bromell receives the Jack Holt Memorial Pace Stick from Sir Jock Kennedy.*



# August 2016 - Mr J Holt & Prodiges (7)

## JACK HOLT MEMORIAL TROPHY

Winner - Flight Sergeant Philip Holt

Flight Sergeant Philip Holt joined the Officer and Aircrew Cadet Training Unit in September 2012 as Flight Sergeant Training Support Flight but was quickly re-tasked as a Deputy Flight Commander on C Flight, C Squadron. During his time on the Squadron he demonstrated outstanding commitment, professionalism and personal standards and, as a result, he was selected for the role of Flight Sergeant Standards in Training Development Squadron. The role is extremely challenging; the incumbent is the gatekeeper of the department's training standards and is responsible for maintaining the integrity of training delivery, providing underpinning instructor support and ensuring compliance with the Defence Systems Approach to Training Quality Standard. Holt met the challenges of the post head on and quickly proved to be an exceptionally worthy incumbent. He was extremely proactive in ensuring his formal qualification as a Defence Trainer Supervisor to supplement his already robust credibility as an experienced and extremely competent instructor; moreover he used his enhanced skills and knowledge to develop departmental policies, procedures, documentation and support mechanisms in line with training best practice. His reputation as a firm but fair instructor, an outstanding SNCO and an individual with an iron integrity has stood him in good stead for the role but he has also worked hard to remove barriers to learning, building extremely effective working relationships with staff at all levels of the command chain and evolving the assurance process from simply a checks and balances approach to one of development and support. Out with his formal training assurance role, Holt regularly volunteers to provide peer mentoring and informal support to his fellow instructors and is viewed by his colleagues as the senior instructor, a hard earned but incredibly worthy

status to have. Holt is currently also acting as Officer Commanding Assurance and Governance Flight, a post which has been gapped for a considerable period, and is doing his utmost to fulfil the responsibilities of a flight of four, a clear indication of his capacity, ability and commitment. Furthermore, as a result of his unquestionable standing in the department and his irreproachable standards, he operates as the Deputy College Warrant Officer, the most senior non-commissioned officer in the department, and subsequently holds a substantial degree of gravitas and influence even beyond that of his primary role. Out with the department, Holt is also responsible for an Officer and Aircrew Cadet Training Unit accommodation block, working tirelessly to maintain and improve the standard of living accommodation provided to our Officer Cadets, and is Deputy Officer in Charge of both the Royal Air Force Cranwell Cycling and Triathlon clubs, competing in associated sporting events in his own time. Flight Sergeant Holt's worth to the department is immense. His professional abilities, personal standards and commitment to the Service combine to make him the epitome of a Royal Air Force Senior Non-Commissioned Officer and the absolute essence of our instructor cadre, and he is therefore highly recommended for the Jack Holt Memorial Trophy.



# March 2007 - Senior College Appointments (1)

## ROYAL AIR FORCE CRANWELL SENIOR APPOINTMENTS

### COMMANDANT ROYAL AIR FORCE COLLEGE & DIRECTOR OF RECRUITMENT AND INITIAL TRAINING (ROYAL AIR FORCE)

Air Commodore R B Cunningham MBE ADC MA RAF

### CHIEF OF STAFF & DEPUTY COMMANDANT ROYAL AIR FORCE COLLEGE

Group Captain M R Waring MA BSc FCIPD RAF

### GROUP CAPTAIN OFFICERS AND AIRCREW SELECTION CENTRE

Group Captain T P McWilliams FRIN RAF

### GROUP CAPTAIN INSPECTORATE OF RECRUITING (ROYAL AIR FORCE)

Group Captain M L Page Grad Dip MS RAF

### GROUP CAPTAIN OFFICER AND AIRCREW CADET TRAINING UNIT

Group Captain I R W Stewart BSc RAF

### OFFICER COMMANDING ROYAL AIR FORCE CRANWELL & No 3 FLYING TRAINING SCHOOL

Group Captain S P Townsend MA RAF

### COMMANDANT AIR CADETS

Air Commodore G Moulds MBE RAF

### COMMANDANT CENTRAL FLYING SCHOOL

Group Captain S P Ayres BSc RAF

### OFFICER COMMANDING ROYAL AIR FORCE LEADERSHIP CENTRE

Group Captain J A Jupp OBE MA BA RAF

### CHIEF OF STAFF AIR CADETS

Group Captain W M N Cross OBE RAF (Retd)

### OFFICER COMMANDING NO 1 ELEMENTARY FLYING TRAINING SCHOOL

Group Captain P A Round MA BSc MRAeS RAF

### PRINCIPAL DENTAL OFFICER

Group Captain D M McCarthy MSc BDS LDS DGDP MGDS RCS RAF

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# March 2011 - College Senior Appointments (2a)

## Royal Air Force College Senior Appointments

### Commandant Royal Air Force College and Director of Recruitment and Initial Training (Royal Air Force)

Air Commodore Paul Oborn was born in Auckland, New Zealand and educated at Auckland Grammar School. He was commissioned into the Royal Air Force in 1980 and, after 2 years of officer and flying training gained his wings as a pilot on the C-130 Hercules aircraft. Thrust into the aftermath of the Falklands War, his operational experience over 2 decades have seen him involved in humanitarian relief missions around the world as well as involvement in both Gulf Wars. A Command pilot and Flight Instructor with over 5,000 flying hours, he was finally wrestled from the flight deck in 1994 and posted to Toronto to attend the Canadian Joint Command and Staff Course. On his return to the UK in 1995, he was employed at Strike Command as a project officer for the introduction to Service of the new Hercules aircraft, known as the C-130J.



Air Commodore P N Oborn  
CBE ADC RAF

On promotion to Wing Commander, he returned to RAF Lyneham to command No. 24 Squadron. Between 2000-03, he was the Personal Staff Officer to the Commander-in-Chief Strike Command before finally returning to his 'roots' and taking command of RAF Lyneham in 2003. He graduated from the Royal College of Defence Studies in 2006 and was posted, on promotion to Air Commodore, to be the UK Air Component Commander in Al Udeid in January 2007. He was made CBE in the New Years Honours List in January 2007 for his command of RAF Lyneham during a very busy operational period which included the loss of Hercules XV179 and her crew. On his return from the desert he was posted to HQ 2 Group as the Air Officer Air Transport and Air-to-Air Refuelling.

Responsible for the safe delivery of the Airbridge into Afghanistan, his duties also included being Director for the Future Brize Norton Programme, the closure and amalgamation of RAF Lyneham's assets into a single AT/AAR hub at Brize Norton. He took up his current role as Commandant RAF College Cranwell & Director of Recruitment and Initial Training (RAF) on the 3 June 2010.

Air Commodore Oborn is married to Sarah, a chartered surveyor and conservation officer, and they have one son, Nicholas.

### Chief of Staff & Deputy Commandant Royal Air Force College Cranwell



Group Captain M F Killen  
BSc MA RAF

Group Captain Martin Killen graduated from St Andrews University in 1980 with a Bachelor of Science Degree in Physics and Mathematics. After flying training, he served in a number of Royal Air Force squadrons in the air defence role and in training. He has commanded at flight and squadron level and has accumulated over 4500 hours on Phantom F4K and F4M, Hawk, and T-38 aircraft. Gp

Capt Killen was a Qualified Flying Instructor (QFI) on the F4 and the Hawk, and was an Instructor Pilot on the T-38. He served as Sqn QFI on 56 (Fighter) Sqn and 74 (Fighter) Sqn, and as OC 1435 (F4) Flight in the Falkland Islands. His last flying appointment was as Wing Commander Central Flying School where he was responsible for assessing flying instructional standards in the Royal Navy, the British Army, the RAF, and foreign and commonwealth air arms by invitation. Staff appointments have included Personal Staff Officer to AOC TG, a tour on the Air Staff in the Ministry of Defence, Head of Air Component and Division Director at the Joint Services Command and Staff College, and RAF Advisor to Commander Air University at Maxwell AFB, Alabama. Before taking up his current appointment he commanded the Officer and Aircrew Training Unit at the RAF College.

Gp Capt Killen is a graduate of the RAF Staff College, the Joint Services Command and Staff College, and the Air War College, and holds a Masters Degree in Strategic Studies.

He is President of the RAF Equitation Association and he is a British Fencing Association Level 2 coach. He plays racquet-ball (badly), sails (in light winds), and enjoys messing around on one ski on the water and on two skis (preferably) in the snow. He is accompanied by his wife Sheila, and children Matthew and Anna.

### Group Captain Officers and Aircrew Selection Centre

Group Captain 'Harry' Hyslop served his first 2 tours as a Buccaneer navigator with 208 and 12(B) Sqs at RAF Lossiemouth in the maritime strike attack role. As a QWI with 12(B) Sqn, he served in Operation GRANBY (Gulf War 1). A staff tour within HQ 18 Gp, phasing out of service the Buccaneer and introduction of the Tornado GR1B, was followed by a Flight Commander tour flying the GR1B on 617 Squadron where he commanded the Squadron over Northern Iraq. After a short tour as the air advisor to the CG of EUCOM (Heidelberg) and JSCSC, a tour at PJHQ followed, responsible for oversight of the ongoing Operations in the Middle East: an excellent precursor for 4 months as the DCFACC and DCBF at Incirlik, Turkey, again in support of NORTHERN WATCH. Returning to the newly formed UK JFACHQ, he was involved with several Operations including PALLISER (Sierra Leone), MAGELLAN I and II (Balkans reinforcements and elections) and ENDURING FREEDOM (Afghanistan) before completing his tour as Chief Combat Operations within the CAOC for IRAQI FREEDOM (Gulf War 2); for which he was awarded the Bronze Star Medal. In June 2003 Group Captain Hyslop took command of 55(R) Squadron, responsible for all RAF rearcrew training, before moving to HQ 22(Trg) Group, Innsworth, in January 2006 to oversee all multi-engine pilot and rearcrew training, and the Transition Team responsible for the introduction of MFTS. In August 2007 he deployed to Baghdad as part of the Coalition Air Force Training Team, where he served as the Senior Advisor to the Iraqi Air Force and leader of the Coalition Air Force Advisory Team for which he was awarded a further Bronze Star Medal. Returning to the UK in December 2007, Group Captain



Group Captain R M Hyslop  
RAF

Hyslop was appointed DACOS J3 Ops Spt at PJHQ, responsible for all J3 Air and Operational Support to UK forces deployed on ongoing Operations, principally in Iraq and Afghanistan, before taking up his current appointment of Group Captain Officers and Aircrew Selection Centre in November 2009.

Married to Sue with 2 children, Harry and Lucy. Group Captain Hyslop lives in his own house in Kettering, Northamptonshire. He is a keen golfer (7 Hcp) who enjoys all sport, reading, gardening and classical music.

### Group Captain Inspectorate of Recruiting (Royal Air Force)



Group Captain I R Tolfts  
OBE MA MCIPR RAF

Group Captain Tolfts joined the Royal Air Force in 1984 as an Administrative (Secretarial) (now Personnel Branch) officer. He completed junior officer tours at a variety of locations including the RAF College Cranwell, RAF Coningsby, RAF Headley Court and RAF Honington. On promotion to squadron leader in 1995, he was posted to RAF Marham as Officer Commanding Estate Management Squadron and was heavily involved in the planning for the rebasing of Tornado squadrons from RAF Bruggen. Following nearly 3 years at RAF Marham, the Royal Air Force Infrastructure Organisation beckoned where he was responsible for property management issues across half of the RAF. Group Captain Tolfts attended Number 4 Advanced Command and Staff Course in September 2000 and was promoted wing commander in January 2001. Following completion of the course, during which he gained an MA in Defence Studies, Group Captain Tolfts was posted to the RAF's Directorate of Corporate Communication in the Ministry of Defence where he was responsible for day to day news management, forging links with the national and international media and development of the RAF's Corporate Communication Strategy. From January to May 2003, he was deployed to the Permanent Joint Headquarters and then the Gulf Region on Operation TELIC where he acted as SO1 Media Ops for the National Contingent Headquarters. He assumed command of Base Support Wing at RAF Brize Norton in August 2003 and during his 2 years there he handled many repatriation ceremonies as well as developing the Station's community facilities extensively. Following 18 months as SO1 A1 Operations at Headquarters Air Command, Group Captain Tolfts assumed his current rank in May 2007 and was appointed as DACOS Media and Communication - a return to his "media roots" - charged with the delivery of the RAF Engagement Strategy. He started his current role as Group Captain Recruiting in July 2010.

Group Captain Tolfts is married to Jo, a freelance consumer and financial journalist. They have a house in the Cotswolds with their 2 (rescue) dogs - Bob, a black Labrador and Benson, a Boxer cross English Bull Terrier - but also a house at RAF Cranwell. Group Captain Tolfts enjoys scuba diving, mountaineering and dining out as well as the enforced interest of trying to keep the garden under control.

### Group Captain Officer & Aircrew Cadet Training Unit

Group Captain Jones was born and raised in Swansea and joined the RAF directly from school in 1979. Following officer and flying training he joined 12 (B) Sqn in 1982 flying the Buccaneer. In 1987, after 2 Buccaneer tours, including completing the Qualified Weapons Instructor Course, he converted to the Tornado F3. Tours followed on both the Tornado and Buccaneer and to date he has accumulated 3500 flying hours. Gp Capt Jones undertook flying command tours as CO Falkland Islands Air Wing and in the dual role of Stn Cdr Mount Pleasant Airfield/COS HQ British Forces South Atlantic Islands.



Group Captain P J Jones  
MA RAF

Group Captain Jones has completed ground tours at the former Strike Command Air to Air Missile Establishment, NATO Air HQ at Ramstein, as DS on ACSC and at the Air Warfare Centre.

The Group Captain flew operationally on Op Pulsator (Lebanon-1983/4) and Desert Storm/Shield (Iraq-1990/1). He has also completed operational deployments in Kosovo, Afghanistan and the Falklands.

Group Captain Jones is married to Barbara and between them they have four children. His hobbies are cricket, cooking and photography. He also spends much time contemplating why he has so many children, when all he actually wanted out of life was a Ferrari.

Gp Capt Jones has just returned from a 1 year course at the USAF Air War College, where he was awarded a Masters in Strategic Studies.

### Dean of the Royal Air Force College



Dr Joel Hayward  
ZDAF BA MA (Hons) PhD

Dr Joel Hayward taught strategy and operational art at the Joint Services Command and Staff College before becoming, in November 2005, the Head of the new Air Power Studies Division created by the Royal Air Force and King's College London. He and his team of academics are based at the historic and prestigious Royal Air Force College, Cranwell, of which he was appointed the Dean in April 2007. Four months later he was also appointed a Director of the Royal Air Force Centre for Air Power Studies (RAF CAPS). Dr Hayward is additionally a member of the CAS Air Power Workshop, a small working group of scholars and other theorists convened by the Chief of Air Staff, Royal Air Force. He is also the academic lead, and air power conceptual designer, of King's new MA, Air Power in the Modern World (subject to validation), as well as a member of the Editorial Advisory Board of both the World War II Quarterly and the Air Power Review.

# March 2011 - College Senior Appointments (2b)

A former Senior Lecturer in Defence and Strategic Studies at the Centre for Defence Studies in New Zealand, his birth country, Dr Hayward has taught in, or lectured to, many officer cadet colleges and command and staff colleges around the world. He continues to teach or advise on air power matters at military academies and colleges throughout Europe and beyond and is a regular speaker at air power conferences. He holds fellowships from the USAF and the Federal Government of Germany.

He has written or edited eight books and dozens of peer-reviewed academic articles, as well as countless newspaper pieces. While retaining his primary focus on air power, Dr Hayward has a wide-ranging intellectual curiosity and nowadays gains greatest pleasure from researching and writing on the ethics of air power and the complex relationship between air power and ecology. Some of his works have been translated into German, Russian, Portuguese, Spanish and Serbian.

Dr Hayward is currently under contract with Cambridge University Press to author a pioneering new study, *An Ecological History of War: The Environment Consequences of Warfare from Antiquity to the Present*.

In May 2007 three of Dr Hayward's earlier articles on German strategy and operational art were considered sufficiently meritorious to be republished by eminent English historian Professor Jeremy Black in a volume of "seminal articles" on the Second World War.

Unusually for a social scientist, he is also active in the literary arts. He has had much poetry and fiction published, including a book of short stories and a book of poetry. Both garnered excellent reviews.

## Officer Commanding No1 Elementary Flying Training School

Group Captain Lee began his flying career on the University of Wales Air Sqn whilst studying for a Bachelor's degree in Marine Biology and Oceanography at Bangor University in North Wales. After completing flying training he was posted to No 201 Sqn RAF Kinloss flying the Nimrod MR2. Catching the closing years of the Cold War, he was able to hone his anti-submarine warfare skill frequently on Soviet nuclear and conventional submarines. During Gulf War 1 the Nimrod switched to an anti-surface role and Flt Lt Lee was the pilot in command of the first Nimrod to patrol the Persian Gulf.



Group Captain Lee  
BSc MA RAF

A CFS tour followed with a posting to the Tucano at RAF Cranwell, where Flt Lt Lee became an A2 flight commander and the Unit Test Pilot. Returning to the front line Flt Lt Lee flew as a captain and AAR pilot on No 206 Sqn RAF Kinloss on the Nimrod, before being promoted into a flight commander position on No 120 Sqn, where he became an Aircrew Checking Officer and IRE.

A ground posting finally arrived with a posting to No 3 Group at Northwood in the post of SO2 Nimrod. A place on ACSC, an MA and promotion followed and in 2003 Wg Cdr Lee was appointed Commanding Officer of No 32 (The Royal) Sqn at RAF Northolt where, although specialising in the BAe 125, he was also able to fly the BAe 146 and Twin Squirrel helicopter.

Following this Wg Cdr Lee was posted to the Directorate of Air Resources and Plans in MOD, before being promoted into the role of Gp Capt Air RP. Gp Capt Lee assumed the post of OC No 1 EFTS on 22 Oct 09.

Gp Capt Lee is married to Alison, a dentist and has 2 children, Jonathon 12, and Susannah 10. They live in their own house in Amersham. Hobbies include motorcycling, classic cars, sailing (dinghy and offshore) and skiing.

## Officer Commanding Royal Air Force Cranwell & No 3 Flying Training School

Group Captain Dave Waddington joined the Royal Air Force in January 1985. Following officer and pilot training, he joined the Tornado GR1 Force in 1988. During his first tour, with 27 Squadron based at RAF Marham, he deployed to Op GRANBY as part of the UK's contribution to the coalition operation to liberate Kuwait. On the 19 January 1991 he was shot down over Iraq and became a prisoner of war, spending the next 6 weeks incarcerated in Baghdad. After returning to flying duties and completing his tour at Marham, he was selected to attend the Qualified Weapons Instructor course, being awarded the prestigious Ferranti Quaiche as best student. Thereafter he was posted as an instructor on the Tornado Weapons Conversion Unit.



Group Captain D J Waddington  
MA RAF

In 1995 he was posted as the first ever exchange officer on the Mirage 2000D with the French Air Force, based at Nancy. He returned to the Royal Air Force in September 1998 on promotion to Squadron Leader and completed a short appointment as the fast-jet flight safety specialist in MOD before being posted as the Executive Officer to 31 Squadron at RAF Bruggen. He was specifically responsible for overseeing the Squadron's relocation to RAF Marham in 2001. After a few months based at RAF Waddington as the tactics and weapons specialist he was selected for the Advanced Command and Staff College during which time he was promoted to Wing Commander and graduated with a Masters degree in Defence Studies.

He returned to the MOD as the staff officer responsible for equipment capability on in-service offensive support aircraft, most notably overseeing the Harrier GR9 upgrade and Tornado future capability. Thereafter he assumed command of IX (Bomber) Squadron in July 2006 until October 2008, during which time he commanded the Squadron on two operational tours of the Gulf.

At the end of his command tour he was promoted to Group Captain and returned to the MOD as the Assistant Head in the International Policy and Plans Directorate with specific responsibility for the Near and Middle East region.

Married to Claire, they have a son, Thomas and daughter Georgia. He is an avid amateur golfer, keeps fit by jogging very slowly and watching Manchester United play football.

## Commandant Air Cadet Organisation



Air Commodore B Cooper  
CBE RAF

Air Commodore Barbara Cooper was commissioned in the Royal Air Force in 1978 as an air traffic control officer. Following her first tour at RAF Finningley in Yorkshire (during which she attained her private pilot's licence), she was selected to become an instructor at the military air traffic control school at RAF Shawbury, Shropshire. She moved on to control at an Area Radar unit in East Anglia, where she completed her 7 year short service commission in 1985.

There followed a brief interlude out of uniform during which she gained qualifications in property management. However, having greatly missed Service life, in 1987 she regained her commission, this time choosing the Administrative Branch. There followed a number of personnel tours in Germany and the UK, including staff officer to the Chief of the Air Staff. Between 1998 and 2000 she commanded the administrative wing of RAF Lyneham in Wiltshire and was appointed as an Officer of the Order of the British Empire for her work there. She attended the first Advanced Command and Staff Course (ACSC 1) and returned in 2000 as Directing Staff on ACSC 4 and 5. She left on promotion to group captain and assumed the role of Deputy Director Service Personnel Policy (Operations and Manning), which included responsibility for operational welfare and the UK's Prisoner of War Information Bureau. In October 2003 she was recognised in the Iraq Operational Honours List for her role in support of the operation, as a Commander of the Order of the British Empire. In 2005 she assumed the appointment of Director Royal Air Force Division, within the Defence Academy at Shrivenham, Wiltshire. She was selected as a Member of the 2007 entry of the Royal College of Defence Studies, of which she completed 6 months before being posted on promotion to Air Commodore as Assistant Chief of Staff Manpower & Personnel Capability at HQ Air Command. Air Commodore Cooper assumed the appointment of Commandant Air Cadets on 1 June 2010.

Air Commodore Cooper is married to William, a happily retired Royal Air Force officer; their home is in Cirencester, Gloucestershire. Since 2003 she has enjoyed the role of reviewing officer at a number of Combined Cadet Force biennial inspections. She is President of the RAF Netball Association and the RAF Theatrical Association. Her interests include horticulture – she enjoys growing more vegetables than can be consumed by the family, is a recreational walker and cyclist, and will take any opportunity to visit the theatre.

## Commandant Central Flying School

Group Captain Simon Blake joined the Royal Air Force in March 1981. Following the usual Fast Jet training route, he took the slightly longer than usual method of getting to the front-line, via a tour flying Canberras in the ECM trg role with No 360 Sqn and a tour as a QFI at No 4 FTS at RAF Valley. Following Jaguar training, he arrived on No 6 Sqn at RAF Coltishall in Oct 1991 to commence a long association with



Group Captain S Blake  
OBE MA RAF

the Jaguar Force. An extended tour saw him promoted to become a Flt Cdr, and subsequently the ExecO on No41(F) Sqn.

During this period at Coltishall, Blake saw operational service in both Iraq (OP WARDEN) and Bosnia (OP DENY FLIGHT, DELIBERATE GUARD) in support of the respective No-Fly Zones imposed in both theatres. Achieving some 180 operational sorties, he also deployed in support of the Harrier Force in Aug-Sep 95 during Op DELIBERATE FORCE; He subsequently led the return of the Jaguar Force to the Bosnian theatre, vice the Harrier Force, in early 1997.

A tour in the Aircraft Programmes and Airworthiness division of the Directorate of Air Operations followed where Blake was responsible for associated issues with the Jaguar, Canberra and Hawk fleets. He successfully completed No 4 ACSC, the first at the then new JSCSC at Shrivenham, during 2000-1, gaining an MA in Defence Studies. Promotion and a relatively short tour as SO1 Jaguar/Canberra/Recece at HQ No 1 Gp was followed by a final tour at Coltishall, this time as OC Operations Wg from Oct 2004 to Apr 2006, the last four months of which saw him act as the Stn Cdr and effectively supervise the closure of Coltishall as a flying station. He was promoted to Group Captain in December 2006 to assume the post of DACOS A3 Ops at HQ Air Command. On 1 Oct 2009, he assumed his current post as Commandant of the Central Flying School.

During his career, Blake has amassed almost 4000hrs, deploying widely on both operations and exercises. His interests include renovating and maintaining the garden of his home in Norfolk, social golf and trying to keep fit.

## Officer Commanding Royal Air Force Leadership Centre



Group Captain P J Sagar  
MBE RAF

Group Captain Sagar joined the RAF as an aircraft technician in 1978 and was employed servicing Vulcan and Harrier aircraft in Lincolnshire and West Germany respectively. Commissioned in 1983 he has since enjoyed a full and diverse career in the administrative branch of the RAF dealing with recruitment, property management, HR management, personnel policy and, latterly, training. Immediately prior to his current appointment, he ran the Equality and Diversity

Training Centre for the Joint Services and specialised in importing accelerated learning techniques to the course material in order to make it more engaging, memorable and more accessible to the students.

His current post is as OC Generic Education and Training centre at Cranwell, overseeing the introduction of the new Professional Military Development (Air) programme, which for the first time will provide a coherent through career delivery of generic education and training to Royal Air Force personnel in order to enhance their agility and better understand the wider aspects of their Service.

Phil Sagar is married to Karen, they have 3 young children, and live in a small village on the banks of the River Avon near Tewkesbury. He is currently undertaking a part-time MA in Leadership Studies with Exeter University. He lists sailing, playing the electric violin and church bell ringing as his hobbies.

# May 2012 - Senior Appointments (3a)

## Royal Air Force College Senior Appointments

### Commandant Royal Air Force College and Director of Recruitment and Initial Training (Royal Air Force)

Air Commodore Paul Oborn was born in Auckland, New Zealand and educated at Auckland Grammar School. He was commissioned into the Royal Air Force in 1980 and, after 2 years of officer and flying training gained his wings as a pilot on the C-130 Hercules aircraft. Thrust into the aftermath of the Falklands War, his operational experience over 2 decades have seen him involved in humanitarian relief missions around the world as well as involvement in both Gulf Wars. A Command pilot and Flight Instructor with over 5,000 flying hours, he was finally wrestled from the flight deck in 1994 and posted to Toronto to attend the Canadian Joint Command and Staff Course. On his return to the UK in 1995, he was employed at Strike Command as a project officer for the introduction to Service of the new Hercules aircraft, known as the C-130J.



Air Commodore PN Oborn  
CBE ADC RAF

On promotion to Wing Commander, he returned to RAF Lyneham to command No. 24 Squadron. Between 2000-03, he was the Personal Staff Officer to the Commander-in-Chief Strike Command before finally returning to his 'roots' and taking command of RAF Lyneham in 2003. He graduated from the Royal College of Defence Studies in 2006 and was posted, on promotion to Air Commodore, to be the UK Air Component Commander in Al Udeid in January 2007. He was made CBE in the New Years Honours List in January 2007 for his command of RAF Lyneham during a very busy operational period which included the loss of Hercules XV179 and her crew. On his return from the desert he was posted to HQ 2 Group as the Air Officer Air Transport and Air-to-Air Refuelling.

Responsible for the safe delivery of the Airbridge into Afghanistan, his duties also included being Director for the Future Brize Norton Programme, the closure and amalgamation of RAF Lyneham's assets into a single AT/AAR hub at Brize Norton. He took up his current role as Commandant RAF College Cranwell & Director of Recruitment and Initial Training (RAF) on the 3 June 2010.

Air Commodore Oborn is married to Sarah, a chartered surveyor and conservation officer, and they have one son, Nicholas.

### Chief of Staff & Deputy Commandant Royal Air Force College Cranwell

Group Captain Martin Killen graduated from St Andrews University in 1980 with a Bachelor of Science Degree in Physics and Mathematics. After flying training, he served in a number of Royal Air Force squadrons in the air defence role and in training. He has commanded at flight and squadron level and has accumulated over 4500 hours on Phantom F4K and F4M, Hawk, and T-38 aircraft. Gp Capt Killen was a Qualified Flying Instructor (QFI) on the F4 and the Hawk, and was an Instructor Pilot on the T-38. He served as Sqn QFI on 56 (Fighter) Sqn and 74 (Fighter) Sqn, and as OC 1435 (F4) Flight in the Falkland Islands. His last flying appointment was as Wing Commander Central Flying School where he was responsible for assessing flying instructional standards in the



Group Captain M F Killen  
BSc MA RAF

Royal Navy, the British Army, the RAF, and foreign and commonwealth air arms by invitation. Staff appointments have included Personal Staff Officer to AOCTG, a tour on the Air Staff in the Ministry of Defence, Head of Air Component and Division Director at the Joint Services Command and Staff College, and RAF Advisor to Commander Air University at Maxwell AFB, Alabama. Before taking up his current appointment he commanded the Officer and Aircrew Training Unit at the RAF College.

Gp Capt Killen is a graduate of the RAF Staff College, the Joint Services Command and Staff College, and the Air War College, and holds a Masters Degree in Strategic Studies.

He is President of the RAF Equitation Association and he is a British Fencing Association Level 2 coach. He plays racquet-ball (badly), sails (in light winds), and enjoys messing around on one ski on the water and on two skis (preferably) in the snow. He is accompanied by his wife Sheila, and children Matthew and Anna.

### Group Captain Officers and Aircrew Selection Centre

Group Captain 'Harry' Hyslop served his first 2 tours as a Buccaneer navigator with 208 and 12(B) Sqns at RAF Lossiemouth in the maritime strike attack role. As a QWI with 12(B) Sqn, he served in Operation GRANBY (Gulf War 1). A staff tour within HQ 18 Gp, phasing out of service the Buccaneer and introduction of the Tornado GR1B, was followed by a Flight Commander tour flying the GR1B on 617 Squadron where he commanded the Squadron over Northern Iraq. After a short tour as the air advisor to the CG of EUCOM (Heidelberg) and JSCSC, a tour at PJHQ followed, responsible for oversight of the ongoing Operations in the Middle East: an excellent precursor for 4 months as the DCFACC and DCBF at Incirlik, Turkey, again in support of NORTHERN WATCH. Returning to the newly formed UK JFACHQ, he was involved with several Operations including PALLISER (Sierra Leone), MAGELLAN I and II (Balkans reinforcements and elections) and ENDURING FREEDOM (Afghanistan) before completing his tour as Chief Combat Operations within the CAOC for IRAQI FREEDOM (Gulf War 2); for which he was awarded the Bronze Star Medal. In June 2003 Group Captain Hyslop took command of 55(R) Squadron, responsible for all RAF rearcrew training, before moving to HQ 22(Trg) Group, Innsworth, in January 2006 to oversee all multi-engine pilot and rearcrew training, and the Transition Team responsible for the introduction of MFTS. In August 2007 he deployed to Baghdad as part of the Coalition Air Force Training Team, where he served as the Senior Advisor to the Iraqi Air Force and leader of the Coalition Air Force Advisory Team for which he was awarded a further Bronze Star Medal. Returning to the UK in December 2007, Group Captain Hyslop was appointed DACOS J3 Ops Spt at PJHQ, responsible for all J3 Air and Operational Support to UK forces deployed on ongoing Operations, principally in Iraq and Afghanistan, before taking up his current appointment of Group Captain Officers and Aircrew Selection Centre in November 2009.

Married to Sue with 2 children, Harry and Lucy, Group Captain Hyslop lives in his own house in Kettering, Northamptonshire. He is a keen golfer (7 Hcp) who enjoys all sport, reading, gardening and classical music.



Group Captain R M Hyslop  
RAF

### Group Captain Inspectorate of Recruiting (Royal Air Force)



Group Captain I R Tolfts  
OBE MA MCIPR RAF

Group Captain Tolfts joined the Royal Air Force in 1984 as an Administrative (Secretarial) (now Personnel Branch) officer. He completed junior officer tours at a variety of locations including the RAF College Cranwell, RAF Coningsby, RAF Headley Court and RAF Honington. On promotion to squadron leader in 1995, he was posted to RAF Marham as Officer Commanding Estate Management Squadron and was heavily involved in the planning for the rebasing of Tornado squadrons from RAF Bruggen. Following nearly 3 years at RAF Marham, the Royal Air Force Infrastructure Organisation beckoned where he was responsible for property management issues across half of the RAF. Group Captain Tolfts attended Number 4 Advanced Command and Staff Course in September 2000 and was promoted wing commander in January 2001. Following completion of the course, during which he gained an MA in Defence Studies, Group Captain Tolfts was posted to the RAF's Directorate of Corporate Communication in the Ministry of Defence where he was responsible for day to day news management, forging links with the national and international media and development of the RAF's Corporate Communication Strategy. From January to May 2003, he was deployed to the Permanent Joint Headquarters and then the Gulf Region on Operation TELIC where he acted as SO1 Media Ops for the National Contingent Headquarters. He assumed command of Base Support Wing at RAF Brize Norton in August 2003 and during his 2 years there he handled many repatriation ceremonies as well as developing the Station's community facilities extensively. Following 18 months as SO1 A1 Operations at Headquarters Air Command, Group Captain Tolfts assumed his current rank in May 2007 and was appointed as DACOS Media and Communication - a return to his "media roots" - charged with the delivery of the RAF Engagement Strategy. He started his current role as Group Captain Recruiting in July 2010.

Group Captain Tolfts is married to Jo, a freelance consumer and financial journalist. They have a house in the Cotswolds with their 2 (rescue) dogs - Bob, a black Labrador and Benson, a Boxer cross English Bull Terrier - but also a house at RAF Cranwell. Group Captain Tolfts enjoys scuba diving, mountaineering and dining out as well as the enforced interest of trying to keep the garden under control.

### Group Captain Officer and Aircrew Cadet Training Unit

Group Captain Jones was born and raised in Swansea and joined the RAF directly from school in 1979. Following officer and flying training he joined 12 (B) Sqn in 1982 flying the Buccaneer. In 1987, after 2 Buccaneer tours, including completing the Qualified Weapons Instructor Course, he converted to the Tornado F3. Tours followed on both the Tornado and Buccaneer and to date he has accumulated 3500 flying hours. Gp Capt Jones undertook flying command tours as CO Falkland Islands Air Wing and in the dual role of Stn Cdr Mount Pleasant Airfield/COS HQ British Forces South Atlantic Islands.

Group Captain Jones has completed ground tours at the former Strike Command Air to Air Missile Establishment, NATO Air HQ at Ramstein, as DS on ACSC and at the Air Warfare Centre.



Group Captain P J Jones MA RAF

The Group Captain flew operationally on Op Pulsator (Lebanon-1983/4) and Desert Storm/Shield (Iraq-1990/1). He has also completed operational deployments in Kosovo, Afghanistan and the Falklands.

The Group Captain is married to Barbara and between them they have four children. His hobbies are cricket, cooking and photography. He also spends much time contemplating why he has so many children, when all he actually wanted out of life was a Ferrari.

Group Captain Jones has just returned from a 1 year course at the USAF Air War College, where he was awarded a Masters in Strategic Studies.

### Officer Commanding No1 Elementary Flying Training School

Group Captain Lee began his flying career on the University of Wales Air Sqn whilst studying for a Bachelor's degree in Marine Biology and Oceanography at Bangor University in North Wales. After completing flying training he was posted to No 201 Sqn RAF Kinloss flying the Nimrod MR2. Catching the closing years of the Cold War, he was able to hone his anti-submarine warfare skill frequently on Soviet nuclear and conventional submarines. During Gulf War 1 the Nimrod switched to an anti-surface role and Flt Lt Lee was the pilot in command of the first Nimrod to patrol the Persian Gulf.

A CFS tour followed with a posting to the Tucano at RAF Cranwell, where Flt Lt Lee became an A2 flight commander and the Unit Test Pilot. Returning to the front line Flt Lt Lee flew as a captain and AAR pilot on No 206 Sqn RAF Kinloss on the Nimrod, before being promoted into a flight commander position on No 120 Sqn, where he became an Aircrew Checking Officer and IRE.

A ground posting finally arrived with a posting to No 3 Group at Northwood in the post of SO2 Nimrod. A place on ACSC, an MA and promotion followed and in 2003 Wg Cdr Lee was appointed Commanding Officer of No 32 (The Royal) Sqn at RAF Northolt where, although specialising in the BAe 125, he was also able to fly the BAe 146 and Twin Squirrel helicopter.

Following this Wing Commander Lee was posted to the Directorate of Air Resources and Plans in MOD, before being promoted into the role of Group Captain Air RP. Group Captain Lee assumed the post of OC No 1 EFTS on 22 Oct 09.

Group Captain Lee is married to Alison, a dentist and has 2 children, Jonathon and Susannah. They live in their own house in Amersham. Hobbies include motorcycling, classic cars, sailing (dinghy and offshore) and skiing.

### Commandant Air Cadet Organisation

Born in Canada, Air Commodore Barbara Cooper was commissioned in the Royal Air Force in 1978 as an air traffic control officer. Following her first tour at RAF Finningley in Yorkshire (during which she attained her private pilot's licence), she was selected to become an instructor at the military air traffic control school at RAF Shawbury, Shropshire. She moved on to control at an Area Radar unit in East Anglia, where she completed her 7 year short service commission in 1985.



Group Captain Lee  
BSc MA RAF



Air Commodore B Cooper CBE RAF

# May 2012 - Senior Appointments (3b)

There followed a brief interlude out of uniform during which she gained qualifications in property management. However, having greatly missed Service life, in 1987 she regained her commission, this time choosing the Administrative Branch. There followed a number of personnel tours in Germany and the UK, including staff officer to the Chief of the Air Staff. Between 1998 and 2000 she commanded the administrative wing of RAF Lyneham in Wiltshire and was appointed as an Officer of the Order of the British Empire for her work there. She attended the first Advanced Command and Staff Course (ACSC 1) and returned in 2000 as Directing Staff on ACSC 4 and 5. She left on promotion to group captain and assumed the role of Deputy Director Service Personnel Policy (Operations and Manning), which included responsibility for operational welfare and the UK's Prisoner of War Information Bureau. In October 2003 she was recognised in the Iraq Operational Honours List for her role in support of the operation, as a Commander of the Order of the British Empire. In 2005 she assumed the appointment of Director Royal Air Force Division, within the Defence Academy at Shrivenham, Wiltshire. She was selected as a Member of the 2007 entry of the Royal College of Defence Studies, of which she completed 6 months before being posted on promotion to Air Commodore as Assistant Chief of Staff Manpower & Personnel Capability at HQ Air Command. Air Commodore Cooper assumed the appointment of Commandant Air Cadets on 1 June 2010.

Air Commodore Cooper is married to William, a happily retired Royal Air Force officer; their home is in Cirencester, Gloucestershire. Since 2003 she has enjoyed the role of reviewing officer at a number of Combined Cadet Force biennial inspections. She is President of the RAF Netball Association and the RAF Theatrical Association. Her interests include horticulture – she enjoys growing more vegetables than can be consumed by the family, is a recreational walker and cyclist, and will take any opportunity to visit the theatre.

## Commandant Central Flying School

Group Captain Simon Blake joined the Royal Air Force in March 1981. Following the usual Fast Jet training route, he took the slightly longer than usual method of getting to the front-line, via a tour flying Canberras in the ECM trg role with No 360 Sqn and a tour as a QFI at No 4 FTS at RAF Valley. Following Jaguar training, he arrived on No 6 Sqn at RAF Coltishall in Oct 1991 to commence a long association with the Jaguar Force. An extended tour saw him promoted to become a Flt Cdr, and subsequently the ExecO on No41(F) Sqn.



Group Captain S Blake  
OBE MA RAF

During this period at Coltishall, Blake saw operational service in both Iraq (OP WARDEN) and Bosnia (OP DENY FLIGHT, DELIBERATE GUARD) in support of the respective No-Fly Zones imposed in both theatres. Achieving some 180 operational sorties, he also deployed in support of the Harrier Force in Aug-Sep 95 during Op DELIBERATE FORCE; He subsequently led the return of the Jaguar Force to the Bosnian theatre, vice the Harrier Force, in early 1997.

A tour in the Aircraft Programmes and Airworthiness division of the Directorate of Air Operations followed where Blake was responsible for associated issues with the Jaguar, Canberra and Hawk fleets. He successfully completed No 4 ACSC, the first at the then new JSCSC at Shrivenham, during 2000-1, gaining an MA in Defence Studies. Promotion and a relatively short tour as SO1 Jaguar/Canberra/Recce at HQ No 1 Gp was followed by a final tour at Coltishall, this time as OC Operations Wg from Oct 2004 to Apr 2006, the last four months of which saw him act as the Stn Cdr and effectively supervise the closure of Coltishall as a flying station. He was promoted to Group Captain in December 2006 to

assume the post of DACOS A3 Ops at HQ Air Command. On 1 Oct 2009, he assumed his current post as Commandant of the Central Flying School.

During his career, Blake has amassed almost 4000hrs, deploying widely on both operations and exercises. His interests include renovating and maintaining the garden of his home in Norfolk, social golf and trying to keep fit.

## Officer Commanding Royal Air Force Generic Education and Training Centre (GETC)

Group Captain Sagar joined the RAF as an aircraft technician in 1978 and was employed servicing Vulcan and Harrier aircraft in Lincolnshire and West Germany respectively. Commissioned in 1983 he has enjoyed a full and diverse career in the administrative branch of the RAF dealing with recruitment, property management, HR management, personnel policy and, latterly, training. Immediately prior to his current appointment, he ran the Equality and Diversity Training Centre for the Joint Services and specialised in importing accelerated learning techniques to the course material in order to make it more engaging, memorable and more accessible to the students.



Group Captain P J Sagar  
MBE RAF

His current post is as OC GETC at Cranwell, overseeing the introduction of the new Professional Military Development (Air) programme, which for the first time will provide a coherent through career delivery of generic education and training to RAF personnel in order to enhance their agility and better understand the wider aspects of their Service.

Phil Sagar is married to Karen, they have 3 young children, and live in a small village on the banks of the River Avon near Tewkesbury. He is currently undertaking a part-time MA in Leadership Studies with Exeter University. He lists sailing, playing the electric violin and church bell ringing as his hobbies.

# May 2013 - Senior Appointments (4a)

## Royal Air Force College Senior Appointments

### Commandant Royal Air Force College and Director of Recruitment and Initial Training (Royal Air Force)



Air Commodore D J Stubbs  
OBE ADC FRaE RAF

Air Commodore Stubbs was born in Chester and educated in North Wales. As an active member of the Air Training Corps he was awarded a flying scholarship in 1979, and soon after commissioned into the Royal Air Force at Royal Air Force College Cranwell (IOT 49- Mar 1981). Following pilot training in Yorkshire and Shropshire he served on a number of operational Support Helicopter Squadrons in various conventional and specialist roles. These have included Jungle Warfare, Sensor Operations, Arctic and Mountain Warfare and Maritime Counter Terrorism with duties in the UK, Northern Ireland and the Balkans operating the Puma, Chinook Mk 1 and 2, Gazelle and Merlin helicopters. He has enjoyed a variety of Command tours; early in his career, in the mid-1980s, he was Officer Commanding the Tactical Air Operations Cell in Belize and later he commanded No 28 (Army Cooperation) Squadron, charged with introducing the Merlin Mk3 helicopter into Royal Air Force service. More recently he was privileged to command Royal Air Force Aldergrove as Commander of the Joint Helicopter Force (Northern Ireland). Concurrently he undertook representational duties as Senior Royal Air Force Officer Northern Ireland.

Air Commodore Stubbs has also served in a number of Staff tours. As a Squadron Leader he was appointed as the Specialist Support Helicopter Staff officer in HQ 1 Group, and subsequently attended the second Joint Advanced Command and Staff Course at Bracknell. He later undertook two tours in the Ministry of Defence in London. The first appointment, in Equipment Capability, involved managing Defence's Strategic Reach Capabilities. The second, on promotion, was a tour in the Directorate or Targeting and Information Operations as an Assistant Director. Following Station Command, Air Commodore Stubbs became a member of the Royal College of Defence Studies prior to his most recent staff appointment in the Ministry of Defence as Head of Capability responsible for Special Projects, Chemical, Biological, Radiological and Nuclear Capability.

Air Commodore Stubbs was appointed Commandant of the Royal Air Force College Cranwell and Director of Recruiting and Initial Training (Royal Air Force) on 6 Mar 2012. He is married to Kath and they have two children, Jack and Emily, who are both currently reading for degrees at University. He is nearing completion on a self-build 'New Home' project and enjoys sailing, cycling, cross country skiing and, occasionally, golf.

### Chief of Staff & Deputy Commandant Royal Air Force College Cranwell

Group Captain Greg Hammond joined the Royal Air Force from Highgate School in 1984 on a University Cadetship to read History at King's College London. Following graduation, initial professional training and three ground tours, he converted to flying duties in 1994, operating as an E-3D (AWACS) mission crew member on Nos 8 and 23 Squadrons, and the Sentry Standards Unit, over a ten-year period (including a break for his first headquarters tour); during this



Group Captain G Hammond  
RAF

time he flew on combat support operations around the Balkans (Bosnia and Kosovo) and over Afghanistan in 2002 and Iraq in 2003.

He has attended the one-year Advanced Command and Staff Course, gaining an MA in Defence Studies as part of the course, and worked twice at the Defence Procurement Agency and its replacement organisation (Defence Equipment & Support), including as Military Assistant to successively the Chief of Defence Procurement and the senior RAF engineering officer.

He commanded the Ballistic Missile Early Warning Station at Royal Air Force Fylingdales for two years from January 2008 before working in the British Embassy, Kabul, for the UK National Contingent Commander in Afghanistan and returning to a UK-based role in the Development, Concepts and Doctrine Centre (the Ministry of Defence's 'think tank').

He was appointed Deputy Commandant of the Royal Air Force College, Cranwell, in September 2012. Group Captain Hammond is from London and enjoys the theatres and other 'bright lights' of the capital; he is a keen follower of current affairs, and maintains his interest in military and political history.

### Group Captain Inspectorate of Recruiting (Royal Air Force)

Group Captain Ian Tolfts joined the Royal Air Force in 1984 as an Administrative (Secretarial) (now Personnel Branch) officer. He completed junior officer tours at a variety of locations including the RAF College Cranwell, RAF Coningsby, RAF Headley Court and RAF Honington. On promotion to squadron leader in 1995, he was posted to RAF Marham as Officer Commanding Estate Management Squadron and was heavily involved in the planning for the rebasing of Tornado squadrons from RAF Bruggen. Following nearly 3 years at RAF Marham, the Royal Air Force Infrastructure Organisation beckoned where he was responsible for property management issues across half of the RAF. Group Captain Tolfts attended Number 4 Advanced Command and Staff Course in September 2000 and was promoted wing commander in January 2001. Following completion of the course, during which he gained an MA in Defence Studies, Group Captain Tolfts was posted to the RAF's Directorate of Corporate Communication in the Ministry of Defence where he was responsible for day to day news management, forging links with the national and international media and development of the RAF's Corporate Communication Strategy. From January to May 2003, he was deployed to the Permanent Joint Headquarters and then the Gulf Region on Operation TELIC where he acted as SO1 Media Ops for the National Contingent Headquarters. He assumed command of Base Support Wing at RAF Brize Norton in August 2003 and during his 2 years there he handled many repatriation ceremonies as well as developing the Station's community facilities extensively. Following 18 months as SO1 A1 Operations at Headquarters Air Command, Group Captain Tolfts assumed his current rank in May 2007 and was appointed as DACOS Media and Communication - a return to his 'media roots' - charged with the delivery of the RAF Engagement Strategy. He started his current role as Group Captain Recruiting in July 2010.

Group Captain Tolfts is married to Jo, a freelance consumer and financial journalist. They have a house in the Cotswolds with their 2 (rescue) dogs - Bob, a black Labrador and Benson, a Boxer cross English Bull Terrier - but



Group Captain I R Tolfts  
OBE MA MCIPR RAF

also a house at RAF Cranwell. Group Captain Tolfts enjoys scuba diving, mountaineering and dining out as well as the enforced interest of trying to keep the garden under control.

### Officer Commanding No1 Elementary Flying Training School

Group Capt John Cunningham joined the RAF as a University Cadet in July 1983 and attained a BSc(Hons) in Biochemistry at Leeds University. On graduation from initial pilot training, he was selected to become a Qualified Flying Instructor (QFI) and taught pilots for the next 2 years at RAF Church Fenton. On completion of fast-jet training, he was posted to the Tornado F3.

The next 5 years saw Flt Lt Cunningham deploying to Italy in support of Operation DENY FLIGHT, holding Quick Reaction Alert (QRA) in both the UK and the Falkland Islands, and selection as a Tornado F3 Instructor Pilot on 56(R) Sqn. He was promoted to Sqn Ldr in November 1998 and spent 2 years at RAF Leuchars as the Operations Flight Commander on 43(F) Sqn. Highlights of this tour included flying operations in support of Op RESINATE(South) over Iraq, and deployment to Singapore in support of the 5-Powers Defence Agreement.

His first staff tour was at HQ 1 Gp where he was responsible for honing the introduction-to-Service plans for Eurofighter Typhoon. In 2003, he attended the Joint Services Command and Staff Course, followed by a tour at the Joint Concepts and Doctrine Centre developing effects-based warfare and leading the Joint Campaign Development Estimates for future Defence capabilities. In March 2005, he spent 4 months as the Chief of Strategy in the Combined Air and Space Operations Centre in Al Udeid, Qatar. Wg Cdr Cunningham then took command of 1 FTS at RAF Linton-on-Ouse charged with delivering the RAF's and RN's future FJ pilots and navigators. In 2008, he joined Joint Force Headquarters as an Operations Liaison and Reconnaissance Team Leader, which included short-notice deployments to Uganda and Ethiopia in support of Defence strategic aims. In March 2010, Gp Capt Cunningham was posted to Camp Bastion Airfield, Afghanistan, as CO 903 Expeditionary Air Wing. As the Airfield Operating Authority, he was responsible for operating the UK military's most complex airfield (equivalent to Gatwick Airport) in a war zone. His last tour was as Gp Capt Typhoon at Air Command, responsible to AOC 1 Gp for the operational commitments, training, coherent delivery of future capability, force growth and display of Typhoon. He is married to Tara, who is the Sqn Ldr RAF Heritage Desk Officer at Air Command. They have 2 young children.

### Commandant Air Cadet Organisation

Born in the Rhondda Valley, South Wales, Dawn left Wales at the tender age of 6 with her family and lived in Wigston Magna, near Leicester, and Kettering before leaving the family home to join the RAF. Dawn joined up at 19 years of age for a 4-year Short Service Commission as an Administrative Secretarial Officer and left the RAF in 2006 having completed 23 years.

Dawn enjoyed a varied career in the RAF which culminated in her appointment



Group Captain W J Cunningham  
BSc RAF

as the Group Captain Inspector of Recruiting for the RAF. On route to this hugely rewarding job, she undertook a wide range of management roles within the Service, including command of the Personnel Management Squadron at RAF Wittering, and the Administrative Wing at RAF Waddington. Dawn completed staff tours in Command Headquarters and in the MOD and was able to fly in a variety of RAF aircraft, including a low-level trip in a Jaguar on her 21st birthday and a flight in one of the Red Arrows to mark her departure from the Service.

Dawn opted to leave the RAF in 2006 as she didn't want to live apart from her family. Repeated staff tours in MOD and Air Command beckoned and, having settled in Lincolnshire and stabilised the children's education for the first time, she opted to leave and find employment closer to home but still linked to the Service. The opportunity to work for the RAF Association developing and managing a new RAF Families Federation was too good an opportunity to miss. She led the RAF Families Federation from its inception in 2007 until July 2012 and thoroughly enjoyed working in support of RAF families, maintaining links with her many friends and colleagues in the RAF.

Recently appointed as the new Comdt ACO, Dawn returns to uniform as a Full Time Reservist and is delighted to remain part of the RAF Family.

Dawn likes to keep fit and enjoys swimming and cycling and undertaking sponsored Challenges. She completed the Inca Trail in Peru in 2008 and a 420km Vietnam to Cambodia cycle in 2011. Married to Paul, a retired wing commander, and mother to Laura aged 17 and Peter aged 12, Dawn spends any spare time walking their 2 dogs around the local Lincolnshire countryside.

### Commandant Central Flying School

Group Captain David Bentley joined the Royal Air Force in 1981 as a Halton Apprentice, graduating as an Airframe and Propulsion technician in 1984. He was commissioned into the General Duties (Pilot) Branch in 1985 and posted to 14 Sqn, RAF Bruggen in 1988 flying the Tornado GR1 in the ground attack role. In 1991 he qualified as a Tactics Instructor on the Hawk at No 1 Tactical Weapons Unit, RAF Brawdy; with the closure of Brawdy in 1992, he was posted to 74 Sqn, RAF Valley. In 1993 he successfully completed the Hawk Qualified Weapons Instructors Course, and in 1994 he was the RAF Valley Solo Hawk Display Pilot completing displays throughout the UK and Europe. He returned to RAF Bruggen in 1995, flying the Tornado GR1 with IX Sqn in the ground attack and Suppression of Enemy Air Defence (SEAD) role. Promoted to Squadron Leader in 1996 he undertook an operational tour as the Mission Director on Op NORTHERN WATCH at Incirlik Air Base in Turkey. Following a Flight Commander tour on 31 Sqn, again at RAF Bruggen, he undertook a staff tour as the air-to-ground weapons specialist within the Air Warfare Centre at RAF Waddington. Promoted to Wing Commander in Apr 01, he took command of the RAF's Flying Training Development Wg at RAF Halton. During that tour he deployed to Saudi Arabia in support of Op IRAQI FREEDOM where he was the Assistant Chief of Staff for UK Air Operations. In Apr 04 he took command of 19(R) Sqn at RAF Valley, the RAF's Tactical Weapons Unit flying the Hawk. During his command he oversaw the tactics and weapons training for Indian Air Force pilots undertaking the highly successful Hawk India Interim Flying Training Programme at Valley. Following a further operational tour as Chief of Staff Operations, HQ 83 Expeditionary Air Group at Al Udeid Air Base, Qatar he successfully undertook the Indian Defence Services Staff College at Wellington, graduating in May 2008. Promoted to Group Captain he commanded the Operations Division of the Air Warfare Centre



Group Captain D A Bentley  
RAF



Air Commodore D McCafferty  
RAF

# May 2013 - Senior Appointments (4b)

where he was responsible for the provision of tactical advice to UK Air platforms, the delivery of Air Power and specialist Air Warfare training, and the tactical facilitation of UK Large Force Employment Air exercises. From Mar-Sep 2011 he commanded 904 Expeditionary Air Wing at Kandahar Airfield. He has been selected to command the Central Flying School as of spring 2012.

He has over 3,000 flying hours on fast jets, is a Qualified Weapons and Flying Instructor, and has conducted numerous operational flying deployments in the Middle East. He is married to Wendy and they have 2 children, Christian aged 9 years and Zara aged 7. His interests include playing and watching most sports, reading and willing Arsenal FC to win a trophy!

## Officer Commanding Royal Air Force Generic Education and Training Centre (GETC)

Group Captain Mark Bunting was born in Belfast in 1960 and was educated at Belfast Royal Academy. He read Physics and Electronics at the University of St Andrews, in Fife, before completing a Post Graduate Certificate in Education at Queen's University, Belfast.



Group Captain M Bunting BSc (Hons) MSc MBA CEng MIET RAF

He joined the RAF in 1984 as an Education Officer in the Administration Branch, and was posted to RAF Cosford, in the West Midlands, as an instructor in Air Radar Techniques. He transferred to the Engineer Branch in 1987 and his first engineering tour was at RAF Marham, as the Junior Engineering Officer on 617 Squadron – the 'Dambusters' Squadron – equipped with Tornado GR1s. As part of this tour, he took part in the initial deployment of UK Forces to Tabuk, in north west Saudi Arabia as part of OP GRANBY.

On return from OP GRANBY and after a short tour at RAF Lossiemouth, he returned to RAF Cranwell to complete an MSc in Aerosystems Engineering. On promotion to Squadron Leader, he then completed a tour at the Air Warfare Centre at RAF Waddington as the technical lead in a team that developed airborne Electronic Counter Measure techniques.

He returned to Scotland in 1996 as the Senior Engineering Officer on the Jaguar Operation Conversion Unit at RAF Lossiemouth, after which he completed a 4-month Out-Of-Area tour in Turkey at Incirlik Air Force Base.

On returning to the UK he completed the Advanced Command & Staff Course at the Joint Services Command and Staff College at Bracknell and then, on promotion to Wing Commander, completed a tour in the Defence Logistics Organisation in the Sentry (E-3D) Integrated Project Team based at RAF Wyton. After 2 years in the IPT he was posted to RAF Kinloss as Officer Commanding Engineering and Supply Wing during the busy period of OP TELIC. During his time at Kinloss he completed his Open University Masters of Business Administration.

Following his tour at Kinloss he returned to RAF Wyton to take post as SO1 Airworthiness Engineering Policy (Governance & Assurance) as part of Director General Logistics (Strike)'s Domain Support Team. This was followed by a tour in MOD 'Deep Centre' as a member of the Capability Strategy team in the Directorate of Equipment Planning. During this time he led the MOD co-ordination of all Urgent Operational Requirements for OP TELIC and OP HERRICK.

Promoted to Group Captain in April 2007, he became Director of the CAPS (Commodity Acquisition Procurement Strategy), followed by a secondment to DG Combat Air's Outer Office as an airworthiness and safety advisor. In July 2008 Bunting was posted to RAF Henlow, as lead OF5 for delivering CIS Urgent Operational Requirements to Theatre within

the Service Operations element of ISS, DE&S. In Sep 2012 he was posted to RAF Cranwell as OC Generic Education & Training Centre.

Mark is married to Ann, manager of the Huntingdonshire Volunteer Centre and they have 3 children – Jamie (21, at Exeter University reading mechanical engineering), Andrew (18, Yr 13) and Sarah (16, Yr 11). Both Mark and Ann are committed Christians and play an active part in the local Church community. Mark is also a Council Member of the Soldiers' and Airmen's Scripture Readers Association (SASRA). In his spare time Mark largely acts as taxi-driver to his children who take part in a bewildering variety of sporting and school activities. When not taxi-driving, he is heavily involved in his local Methodist Church.

# August 2016 - Senior College Appointments (5)

## ROYAL AIR FORCE COLLEGE CRANWELL SENIOR APPOINTMENTS

### *COMMANDANT ROYAL AIR FORCE COLLEGE CRANWELL*

Air Commodore C J Luck MBE ADC RAF

### *COMMANDANT AIR CADET ORGANISATION*

Air Commodore D A McCafferty RAFR

### *DEPUTY COMMANDANT*

Group Captain G B T Hammond RAF

### *COMMANDANT CENTRAL FLYING SCHOOL*

Group Captain J H Hunter BSc MA RAF

### *COMMANDANT No.3 FLYING TRAINING SCHOOL*

Group Captain A Coope OBE MA BEng RAF (Nov 15)

Group Captain J D Milne DFC MA RAF (Dec 15)

### *COMMANDANT No.6 FLYING TRAINING SCHOOL*

Group Captain A Dickens OBE MA RAF

### *GROUP CAPTAIN RECRUITMENT & SELECTION*

Group Captain C C Coton MA RAF (Jul 15)

Group Captain P R Sanger-Davies MVO MA BA (Hons) RAF (Aug 15)

### *OFFICER COMMANDING OFFICER & AIRCREW CADET TRAINING UNIT*

Wing Commander G Bettington BA MA MCIPD RAF (Pre-Mar 15)

Wing Commander E J Keith BA RAF (Mar 15)

### *OFFICER COMMANDING OPERATIONS WING*

Wing Commander N Driscoll RAF

### *OFFICER COMMANDING BASE SUPPORT WING*

Wing Commander E Middleton MA BSc RAF

### *CHIEF OF STAFF RAF COLLEGE HEADQUARTERS*

Wing Commander R W Barnes RAF

### *STAFF OFFICER PROTOCOL ENGAGEMENT CEREMONIAL & HERITAGE*

Wing Commander R J Willis BA (Hons) MCMi RAFR

### *COLLEGE BURSAR*

Mrs A B Sturtridge