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ROYAL AIR FORCE HISTORICAL SOCIETY

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SELECTED GLOSSARY

AAA	Anti-Aircraft Artillery
ALI	Air-Land Integration
AMO	Air Ministry Order
AMP	Air Member for Personnel
BAWA	Bristol Aerospace Welfare Association
CAOC	Combined Air Operations Centre
CDS	Chief of the Defence Staff
CST	Command and Staff Training
DAF	Desert Air Force
DCA	Director of Civil Aviation
DCI	Defence Council Instruction
EATS	Empire Air Training Scheme
GPO	General Post Office
GST	General Service Training Scheme
HAS	Hardened Aircraft Shelter
IOT	Initial Officer Training
ISS	Individual Studies School
JC&SS	Junior Command and Staff School
KRs& ACIs	King's Regulations and Air Council Instructions
LG	Landing Ground
LO	Liaison Officer
MAFL	Manual of Air Force Law
OATS	Officers Advanced Training School
SAM	Surface-to-Air Missile
SHAEF	Supreme Headquarters Allied Expeditionary Force

Our Guest Speaker, following the Society's Annual General Meeting at the RAF Club on 22 June 2016, was

Air Chief Marshal Sir Richard Johns GCB KCVO CBE

Chief of the Air Staff 1997-2000 whose topic was:

SOME REFLECTIONS ON THE EMPLOYMENT OF AIR POWER IN THE 1990s

I'd like to start by saying how honoured I was by the Society's invitation to become its President. History, and in particular military history, has been an enduring interest since my school days, so appointment as your President represents for me an apogee of my enthusiasm for the subject, and particularly in the context of the life story of the RAF.

So, thank you and rest assured that I am fully aware of having to fill a very large pair of boots following the death of MRAF Sir Michael Beetham. In one capacity or the other I worked for Sir Michael as a flight lieutenant, squadron leader, wing commander and group captain so my judgement is well informed.

During my 44 years of service I was fortunate to qualify as captain on fourteen different types of aircraft – eleven fixed wing and three rotary. So I thought I would entertain you with some reflections on the more interesting types such as the Javelin and the Harrier. But then I realised that Sir Freddie Sowery, the first CO of a Javelin squadron would most probably be present as would such Harrier Force luminaries as George Black, Roger Austin and Jock Heron. So, rather than expose myself so early to expert opinion, I thought it best to give you some thoughts on the employment of air power in the 1990s and to focus specifically on operations in the Balkans.

Before doing so, and as a scene setter, let me just remind you of the RAF's operational commitments post-Gulf War I. From July 1991 the RAF was fully committed to Northern and Southern Watch operations over Iraq. The Jaguar and Harrier Forces took on Op WARDEN in the north and the Tornado Force Op JURAL in the south. These operations, supported by VC10 and TriStar tankers, endured until the start of Gulf War II in 2003.

A No-Fly Zone over Bosnia and Herzegovina came into effect in April 1993 and the RAF deployed to Italy Tornado F3 and E-3D

Sentry aircraft to contribute to the NATO mission, DENY FLIGHT. A Jaguar squadron was also based in Italy to respond to any United Nations requests for fire support. Nimrods were deployed under Op MARITIME GUARD to monitor the movement of shipping in the Adriatic in support of a naval blockade mounted under a UN Security Council resolution which enforced embargos on the former Yugoslavia. And let's not forget the relief operation into Sarajevo, code named Op CHESHIRE, which lasted from July 1992 until January 1996. RAF Hercules flew 1,997 sorties delivering 20% of the total UN airlift, an average of some 200 tonnes of supplies a week. While all this was going on, Tornado F3s, Hercules tanker/transports, and Chinook and Sea King helicopters, plus a RAF Regiment Rapier squadron remained based in the Falklands to deter the possibility of Argentine aggression.

As an illustration of the scale of effort required to meet UN and NATO tasking, in one year alone the RAF flew more than 2,000 sorties over Iraq, totalling 6,000 flying hours while Jaguars and Tornados together amassed 10,000 flying hours on Op DENY FLIGHT. These figures do not include the huge amount of flying undertaken by Strike Command's combat support aircraft.

Thus, from 1990 to my departure from the service in 2000 the RAF was involved in non-stop operations. Within these years the RAF was transformed from a home- and European-based, largely static, organisation to its new posture of an expeditionary air force. TACEVAL was no longer the measure of operational ability and efficiency. The measure now was the reality of live operations, as represented by long-standing and continuing commitments to operations in the Near East and Middle East.

The end of Gulf War I focused on lessons learnt which immediately provoked an endless debate on how that war had been won. To my mind, at the time, coalition air power had shaped the ring for coalition ground forces so as to mould the operational environment to the benefit of surface units. On the other side of the coin, General Kroesen, US Army Retd, said at the end of Gulf War I: 'The recent air campaign against Iraq ground forces gained not a single one of the US or UN objectives in the Persian Gulf War. Four days of land combat – aided immeasurably by the air campaign – achieved every goal and

victory.'[1] I don't buy that assessment. For my money it was coalition air forces that had denied Saddam Hussein the strategy of his choice. This was achieved through the immediate establishment of control of the air which allowed General Schwartzkopf to authorise air attacks on both strategic and tactical targets. Total information dominance was achieved which allowed coalition ground forces to redeploy for the key flanking attack without detection or disruption. Thus with powerful land forces exploiting the impact of air power the coalition imposed its strategy on Saddam Hussein.

The debate after Gulf War I was something of a sterile exercise, some of it certainly provoked by defence contractors with their own commercial interests to satisfy, which cloaked more serious issues and assessments from public scrutiny and debate. While the air campaign demonstrated both the strengths and inherent limitations at that time on the conduct of air operations, there was no doubt that within all levels of warfare, whether on land, at sea or in the air, there are few if any absolutes. Balanced judgements within the joint arena of warfare can only be made through the abandonment of prejudice by dispassionate consideration of first, military facts and, second, political sensitivities which condition the use of military force.

The experience of Bosnia-Herzegovina helps to underline this point because the shaping of the operational environment in the Balkans provided an illuminating contrast to that of the Gulf War. For many months, in a very complex environment, air power was not brought fully to bear. It was applied irregularly and in small doses, because timing, in relation to diplomatic initiatives and operational and humanitarian constraints, was critical. Moreover, the widespread dispersal of small, and often isolated, detachments of multinational ground forces required the exercise of caution. But, in retrospect, problems with confused political objectives and the often contradictory requirements of peace enforcement and humanitarian relief can be identified. Further difficulties ensued from extended and duplicated chains of command within the UN and NATO. In essence the UN had deployed a peace-keeping force on the ground and NATO a peace-enforcement force in the air. But, procedures were improved and perceptions which may have been created in 1993 and 1994 of the

[1] General Frederick J Kroesen, letter in the *Washington Post*, 7 November 1994.

relative impotence of air power were abruptly shattered as UN land forces were deployed for self-protection and the weight of NATO air power was unleashed in Operation DELIBERATE FORCE on 30 August 1995.

Two significant, and appalling, events in Bosnia triggered the launch of the air campaign against the Bosnian Serbs. The first was the massacre in July in Srebrenica of 7,000 Muslims which was followed a month later by a mortar bomb attack on the Sarajevo market place that killed 38 civilians and injured hundreds more. These atrocities caused the UN and NATO command keys to be turned with a single purpose as NATO air power was coordinated with artillery provided by the newly created British, French and Netherlands Rapid Reaction Force. The guns, positioned high up on Mount Igman, were tasked to neutralise Bosnian Serb heavy weapons around Sarajevo. Further pressure on the Serbs was exerted by the Croat-Muslim Federation ground offensive in the Serb Krajina region.

NATO attack aircraft flew 3,515 sorties against targets approved by NATO and the UN. 1,020 munitions were launched of which 700 were precision guided. The plan, devised by General Mike Ryan USAF, was the real debut of precision warfare executed by dominant air forces. Air operations lasted for an overall three weeks with a six-day pause after 48 hours of operations, as the Serbs hoped to benefit from the timidity of some UN and NATO members. Once resumed, an agreement was soon reached with the Serbs which led to the Dayton Accord that was formally signed in December. United Nations Protection Force troops were replaced by the NATO Implementation Force of 60,000 troops which put an effective stop to violence in Bosnia and Herzegovina. I have never claimed that success was achieved by air power alone. Over a long period ground forces had held the ring whilst international leaders and aid agencies played out their hands. The Croat offensive in the Serb Krajina would certainly have helped weaken Serb resolve, as did the deployment and support of artillery around Sarajevo. But I shared the judgement of Admiral Leighton Smith USN, the NATO theatre commander at the time, that it was the relentless pressure and precision of up to seven NATO air attack packages a day that finally persuaded the Serbs that the international community really meant business. Without the commitment of air power the savage war in Bosnia would certainly

have ground on much longer.

Despite many differences between the operating environments of the Gulf and Bosnia Herzegovina, the contribution of air power towards the achievement of respective strategic objectives had some commonalities. In both instances air power responded flexibly to the needs of the moment and was employed within an overall strategic plan. Air power was both available to pursue high level strategic objectives whilst providing support to the tactical activities of lower level commanders. But, most importantly, while the limitations of some aspects of air power technology were demonstrated, both operations provided proving grounds for advanced weapons systems that air forces had been incorporating into their inventories during the previous decade. The consequence was that air power's offensive potential began fully to match earlier expectations such that the imposition of the characteristics of past bombing campaigns on to contemporary air strike capabilities represented a classic case of trying to compare apples and oranges.

Let me now move on to Kosovo. The NATO campaign against Serbian aggression in Kosovo started on 24 March 1999. There was no intention to commit ground troops to land operations in Kosovo which left air power as the only military instrument NATO could use. The air campaign lasted for 78 days before Mr Milosevic agreed to the withdrawal of Serbian forces from Kosovo. Predictably the debate on 'who won the war' started immediately.

Throughout the course of Operation ALLIED FORCE (the NATO air operation against Serbian military and infrastructure targets in Kosovo and Serbia) NATO operations were subject to continual and critical analysis from a number of media and military 'experts'. Their reports gave the impression that NATO aircraft were operating from a safe haven above 15,000 feet raining down bombs on a largely defenceless Serbia. Furthermore, the critics suggested that many of these bombs missed their targets and no real damage was done to the Serbian military machine, apart from the destruction of dummy tanks, because NATO air crews would not come down to low level to close with the enemy. When the ceasefire was secured and air offensive operations concluded, the same critics implied that the air campaign was largely a nugatory effort, and that it was the growing threat of a land invasion which caused Milosovic to bend to NATO's will.

From my perspective, it was true that the NATO chain of command placed a high premium on the safety of its aircraft and aircrew, and as the professional head of my Service at the time, I said ‘a good thing too’. I would not want the men and women trusted to my care ever to feel that I, or my senior commanders, would be tempted to be profligate with their lives. That said, had we given the Serbs greater opportunities to shoot down our aircraft by consistently flying within the range of their man-portable SAM systems and light AAA, and they had succeeded in knocking down NATO aircraft every time they flew over, I could think of nothing which would have given a greater boost to their morale.

On the other side of the coin, the centre of gravity of the Alliance was the cohesion of NATO and I wondered whether it would have been sufficiently strong to accept a steady flow of aircraft losses and aircrew casualties. It seemed to me that some, otherwise well-informed and intelligent people, albeit totally lacking in military experience, could not get to grips with the fact that war is not an exercise in chivalry in which honour demands an even-handed and fair contest. War is, and will remain, a nasty and brutal business in which the aim is to achieve political objectives with the least possible loss to one’s own side. This requires concentration of one’s strengths and advantages on the enemy’s weaknesses with no prizes awarded for manufacturing an evenly balanced fight, let alone sustaining unnecessary casualties.

It should also be remembered that the airspace above 15,000 feet was not a safe haven. While the Serb Air Force quickly threw in the towel, and incidentally lost 115 combat aircraft, including helicopters, in the course of the short war, their ground-based air defences fired over 700 SAMs at coalition aircraft and engaged with heavy AAA on numerous occasions. We did not lose aircraft because we first won the battle for control of the airspace. Thereafter, the effectiveness of our countermeasures, the skills of our aircrew and a large slice of luck brought safely home all but two of the 829 aircraft from 14 countries that were placed under NATO control.

Some incontrovertible statistics about the Kosovo air campaign. NATO air forces flew some 38,000 missions of which about a third were strike sorties that delivered 10,000 tonnes of ordnance. From a purely national perspective, RN Sea Harriers flew 100 air defence

sorties while Harrier GR7s and Tornado GR1s mounted more than 1,000 bombing missions. RAF VC10 and TriStar tankers and E-3D Sentry AWACS aircraft flew a further 500 combat support missions with hundreds more sorties flown by RAF air transport aircraft in support of our deployed forces. On a number of occasions, in poor weather, our Tornados and Harriers penetrated Serb air defences to get to their targets but returned home with their weapons because they were unable to identify positively their aiming point or to achieve a consistent aiming solution. This represented a discipline within the ranks of our operational aircrew of which I was deeply proud.

As to the effectiveness of the campaign, 421 static targets with multiple aiming points were attacked, and less than 20 of these missions involved incidents of significant collateral damage, none attributable to the RAF. More than three quarters of targets attacked suffered severe damage. Against fielded targets, General Wesley Clark (NATO's Supreme Allied Commander Europe) provided clear evidence that air strikes were successful in inflicting pain on Serbian Security Forces while at the same time restricting their operational flexibility in Kosovo. But war is not a matter of pure statistics. Figure work cannot show the effect of the air offensive on the Serbian military who had to keep their tanks and other important assets hidden and inoperative to avoid attack. Immediate destruction of dummy equipment by air attack could not have improved their morale. At the end of the air campaign, as NATO ground forces prepared to enter Kosovo, General Clark said: 'The conflict ended on NATO's terms. Serb Forces are out; NATO forces are in; the refugees are home; a cease-fire is in place.'[2]

Only Milosovic knew for certain why he had capitulated so suddenly. In my opinion his decision was prompted by three factors. First, the indictment of him and four other senior figures within his regime by the International Criminal Tribunal for the Former Yugoslavia exercised an unsettling effect on his personal morale. Secondly, increasing international isolation, culminating in Russian involvement in the diplomatic process of pursuing G8 principles, manufactured a further pressure point and an important parallel

[2] Press Conference on the Kosovo Strike Assessment held by SACEUR at HQ NATO, Brussels on 16 September 1999.

activity to the continuing air campaign. Thirdly, the announcement that NATO would be updating its planning for ground operations must have played its part in convincing Milosovic that waiting for NATO's will to break was no longer an option.

But I do not believe that these three factors, either individually or collectively, exercised sufficient pressure to explain why Milosovic, a master of unscrupulous brinkmanship, so suddenly accepted NATO's conditions for a ceasefire in early June 1999. So that leaves the coercive effect of the air campaign within which I think three informed judgements can be made.

When Serb land forces came out of hiding to counter the Kosovo Liberation Army[3] (UÇK), they suffered serious losses through air attack. It would have been apparent to the Serbs that their operations against the UÇK were rendered largely non-effective by NATO air power. Perhaps more critical was the effect of NATO air attacks on Serbia itself. Apart from damage to military infrastructure, NATO's attacks seriously damaged the wealth of the industrialists and fat cats who underpinned Milosovic's hold on power. And what is undeniable, other than by distorting facts beyond recognition, is that, without the bombing, the return of refugees to their homes would have been long delayed.

Although the air campaign was a decisive element within Op ALLIED FORCE this is not to say that success was achieved by air power acting in isolation. The operation was joint, within which Alliance navies and armies made their own contributions. Navies provided launch platforms for aircraft and cruise missiles while land forces contributed recce drones in support of the air campaign while making a valuable contribution to humanitarian relief. And, by their eventual presence on the ground, land forces undoubtedly helped prevent further regional destabilisation and conflict spill-over.

It is worth mentioning that in May 1997 I was sent to SACEUR's HQ at Mons by CDS to record our National concern about the conduct of the air campaign. It seemed to us that the targeting policy, as agreed in NATO HQ, was not being followed by the NATO Regional Air Commander. In essence, NATO wished the air campaign to represent

[3] UÇK – the *Ushtria Çlirimtare e Kosoves* aka the Kosovo Liberation Army (KLA).

a graduated escalation of force rather than a heavy and early concentration of force on larger significant infrastructure targets within Serbia. In our view the Air Commander was getting too far ahead of the plan. I was also instructed to say that if Milosovic's will to fight had not been broken by September the British Government was prepared to field an invasion land force of some 50,000 personnel. SACEUR's surprise at this statement was reflected in his immediate question, asking if I had been authorised to say this! I could only reply that my authorised statement reflected the Government's determination to bring Milosovic to book.

Taking an overview of Kosovo, Bosnia and Gulf operations I think we can safely conclude that air power was, and will remain, the primary instrument of initial reaction when military force to achieve political objectives is considered. Air power is attractive because it can be quickly deployed and returned while requiring less human and material commitment to achieve agreed objectives with fewer political risks. But every conflict is characterised by unique factors such that air power may not always provide the best solution and is unlikely ever to be a complete panacea.

It remains a fundamental military truth that control of the air will continue to be an essential prerequisite for the successful conduct of surface operations. Air power will continue to shape the battlespace to allow maritime and land forces to exploit the impact of air operations and while sometimes, as in Kosovo, it may be possible to achieve strategic objectives without the committal to action of surface forces, we must continue to strive for the most efficient application of military effort through the harmonisation of surface and air operations. This will only be achieved across the spectrum of defence if the effectiveness of our armed forces is based on an appropriate balance of combat power within a mix of defensive and offensive capabilities that provide mobility, firepower and logistic support. True in 2000, when I left the Service, and, dare I say – still true today.

DISCUSSION

Gp Capt Kevan Dearman. Could you expand a little on the command arrangements for DELIBERATE FORCE?

Air Chf Mshl Sir Richard Johns. At the time, which was the summer of 1995, I was commanding AFNORTHWEST, the North Western region of NATO. We were supplying people to help man the HQ in-theatre – in Italy – but we were, obviously, at some distance from the action. But one day I got a phone call from SACEUR, General George Joulwan, asking – well telling me really – to go down to Naples and cast my eye over the plan that was being drawn up by CINCSOUTH, Admiral Leighton 'Snuffy' Smith, and his Air Commander, Lt Gen Mike Ryan who, incidentally, went on to become Chief of Staff USAF when I was CAS. George wanted me, as the senior airman in NATO at the time, to go over the plan in fine detail and then call him to confirm that I was content with what was being proposed before he laid it before the Military Committee. So I went down to Naples and met Snuffy and Mike who took me into a room, and it was notable that the only people in there were Americans and Brits. I commented on this to Snuffy who said that, if he had had anyone else from his HQ in there, the plan would have been in Belgrade within hours. That was in marked contrast to the way that business was done in my HQ at High Wycombe – if I had tried to exclude the Norwegians or the Danes, there would have been Hell to pay! Clearly, things were different in the Southern Region . . .

Anyway, to cut a long story short, we went through every one of the target sets and the strike forces that were being assigned to them and, apart from a few questions, that I asked out of interest more than anything else, I was entirely content with the plan. So, I returned to High Wycombe and rang SACEUR to reassure him that it was all OK. I was never sure whether George was just 'covering his six' so that, if the whole thing turned into a can of worms, he would be able to say 'My senior airman said it would be OK'. That was hardly necessary really, because Snuffy was a very experienced US Navy aviator having flown 280 missions over Vietnam and Mike had done more than 100. But what interested me – which resonates rather with Wg Cdr Rait's paper on personal relationships between senior commanders, that the Society has just recognised – was that my 60-

odd missions in Aden were quite insignificant compared to what these American guys had done, yet they seemed to be quite undisturbed by having a Brit muscle-in to check their work before awarding it a big tick and endorsing it to their – American – boss. I just wonder what would have happened if the position had been reversed – if the Brits had been in charge of the plan and some Yank had pitched-up to check it out. Would he have been received as warmly as I was? Would we have been so free with the fine detail, the overall concept and so forth? I rather suspect not. The air force might have been reasonably co-operative, but the Army would have been far less accommodating. Why? Because, ever since WW II, the RAF and the USAF have been so intimately interlinked, in both planning and operations, that it has resulted in a level of understanding and respect that has fostered a degree of mutual confidence in their respective professional abilities. That was very evident in the reception that I got down in Naples. It provided me with a fascinating insight – indeed one which I discussed with Snuffy at the time.

Seb Cox. Having said something about DELIBERATE FORCE, when you were sent down, by SACEUR, to see what was being proposed in 1995, I would like to fast-forward a few years to Kosovo and ask a related question. By that time you were CAS and, as such, the professional head of the air force. At the beginning of the Kosovo campaign, Madeleine Albright, the US Secretary of State, indicated that it would only be four or five days before the Serbs caved-in. In the event, it actually took seventy-eight. Were you, at any time, asked by the higher echelons in the UK for your view on that campaign?

Sir Richard Johns. Thank you. I should probably start by outlining the routine. The Chiefs used to meet, under the Chairmanship of CDS, in the bunker at MOD at about 7 o'clock in the morning, when we would be briefed on what had happened overnight and, in particular, on operations involving the RAF. After that CDS would go on, alone, to update Ministers. Later in the day Air Cdre Mike Heath would come to see me with the list of targets that had been allocated to the RAF and I would go through them to satisfy myself that they were all within any national constraints that had been imposed on our operations. This was mainly to do with ensuring that there would be minimal collateral damage – even if things went badly wrong. Having

seen me, Mike Heath would then take them to the Attorney General to make sure that he was equally content. Only then was authority granted for our deployed forces to carry out their assigned missions. So, you can see that British participation in the air campaign was very tightly controlled.

On the very first night, I think it was four, Harriers were despatched – and they all brought their weapons back. When the Chiefs met the next day, CDS, Charles Guthrie, was naturally very disappointed and he demanded to know what was going on. I explained that the weather had prevented them from establishing laser locks on the targets and, rather than bombing 'in hope', they had returned to base with their bombs still on board. I advised CDS that, when he saw Ministers, he should make sure that they understood this and that he should tell them that they should be very proud of the discipline exhibited by the RAF's aircrew in bringing their weapons home. If they had done otherwise, taken the soft option and just launched them into space, there would have been a significant chance that this would have had unfortunate consequences resulting in a political backlash that Ministers would have had to deal with. For that very good reason, I think that the RAF actually brought back something like 30% of its weapons – which spoke volumes about the discipline of our people.

As to advising the government, I was asked by CDS – this would have been in about May – shortly after the Prime Minister had been to the States to meet President Clinton and to make his famous 'Blair Doctrine' speech at Chicago – to give my personal assessment of the conduct of the air campaign.

At this stage, never mind four days, we were well into the second month and there was no sign of Serb resistance crumbling. By 6 o'clock I had produced a short paper addressing, what I believed to be, the faults in the air campaign, and how, following a recent visit to SHAPE when I had discussed this with SACEUR, they were being rectified and my assessment that it would all be over no later than September. As it turned out, it actually ended much sooner than that – in June. There was, in this instance, a fundamental difference in the approaches being advocated by ourselves and the Americans. As I said earlier, they wanted to go 'for the head of the snake' straightaway; we wanted to play it more gradually, ratcheting up the pressure until

resistance broke. We reasoned that it was not necessary to deliver massive strikes, because no developed European country could withstand the selective, progressive destruction of its infrastructure – communications were going, TV was being taken out, radio, and so on and they would eventually be forced to negotiate. And I was right – no country can tolerate bombardment by 800+ aircraft when it had little with which to defend itself beyond a few missiles. Curiously, I have no idea what happened to that paper. I sent it to CDS and I received an acknowledgement and it was evidently put on some sort of circulation because one or two senior civil servants commented favourably on it – which gave me a nice warm feeling (I respond to flattery as well as the next man). But thereafter it seems to have disappeared. Oddly enough, however, there is no trace of, what was I think, that quite significant paper in my personal CAS files which are held by AHB.

Gp Capt Jock Heron. The employment of Sea Harriers was pre-Joint Force Harrier. How was the involvement of the Fleet Air Arm handled? Was it a relatively independent naval affair or was it under 'Air' control.

Sir Richard Johns. There were no problems with the Navy's Sea Harriers; they were fully integrated into the system of 'Air' control. COMAIRSOUTH, Lt Gen Mike Short, had operational control of all assigned NATO air contingents with tactical control being exercised via COMFIVEATAF's CAOC at Vicenza. There were some problems with the overall direction of the campaign at one stage, but I wouldn't care to delve any more deeply into that, beyond saying that these were resolved.

Wg Cdr Jeff Jefford. Modern 'instant' communications make it much easier for politicians to attempt to micromanage the military. Did you find that a problem, or were you given a set of rules and then more or less allowed to get on with it?

Sir Richard Johns. If you go back to Gulf War I, when I was Director of Operations at High Wycombe and which I have previously spoken about at one of this Society's seminars, political involvement was very significant. In the early stages the MOD was actually requesting the implementation of a direct one-to-one link between the Secretary of State for Defence and a Brigade Commander engaged in

operations in the field. That would have been a nightmare. It took a few days, but Paddy Hine, who was the Joint Force Commander was able to persuade Ministers that that would have been most inappropriate, because Brigade Commanders had far more important things to do than make themselves available for polite teatime chats with London. That was the worst case I came across. It didn't happen in DELIBERATE FORCE. That was a Conservative administration, and I think that they had absorbed the lesson. In Bosnia/Herzegovina in 1995 we had a significant Army input. The Commander of UNPROFOR in-theatre, Lt Gen Rupert Smith, was able to keep London well-informed of developments. There were some initial problems but the UN and NATO chains of command eventually came up with a form of composite plan which brought the Serbs to the conference table. So that wasn't bad in terms of 'interference'.

And Kosovo? Again – not a problem. I should perhaps say that Tony Blair was 100% committed to getting the Serbs out of Kosovo. Indeed, our use, for a time, of Tornados based in Germany, which involved, I think, something like a six-hour round trip was symptomatic of his determination to see this thing through. But he was well aware of the painstaking preparatory work being done in the selection of targets down south, and the fact that, as I have already described, those assigned to the RAF were being personally reviewed by myself and endorsed by the Attorney General, reassured him that we wouldn't allow him to be dropped into an embarrassing political situation. So there was no need for excessive ministerial intrusion. I could add, in the context of the Prime Minister's resolve, and this is not I think very widely known, that when I was sent across to see SACEUR I had explicit instructions to tell him that if it wasn't sorted out by September the UK would field a land force of 50,000 soldiers and lead an invasion of Kosovo.

AVM Nigel Baldwin. Did you ever have to explain the limitations of air power to relatively naïve and uninformed politicians and civil servants? I don't mean that unkindly, but as you and I found during Gulf War I we sometimes had to educate people as to what we could, and couldn't, do. After you had moved onwards and upwards, I imagine that you must have continued to have to deal with people who were unfamiliar with what we do. Was that the case? Was it 'a

problem'?

Sir Richard Johns. Yes, it was rather. In fact, I became particularly concerned about it during Kosovo when the prevailing view within the MOD was that our aeroplanes were under no threat. We used to run an annual briefing for retired air marshals at Cranwell. In 1999 it was held shortly after the Kosovo campaign and, rather than just banging on about the deliberations of the Air Force Board Standing Committee, I tasked CinC Strike Command with laying on a one-off presentation by aircrew representing Harriers, Tornados, tankers and the E-3D. It was to be a composite affair to describe, specifically in the context of Kosovo, what they had done with a view to emphasising the complexity inherent in the selective application of tactical air power – and the risks involved. It was something of a revelation to the retired 'old and bold' many of whom, accustomed to the pre-planned rigidity of Cold War procedures, were really surprised at how complicated it all was. It also served to counter some of the more annoying articles in the press that were suggesting that the air campaign was relatively risk-free. I hadn't seen the presentation myself prior to the event and, although I was, of course, well aware of how current operations were conducted, I have to say that I was pretty impressed with it too.

I did, as Nigel surmised, frequently have to deal with misconceptions at the MOD and I decided to break my 'one-off' promise and tell the guys that they were going to have to do it again – just once more, in London. I wrote to the Secretary of State, all the Defence Ministers, the other Service Chiefs, the Central Staffs and so on and told them that they had to come along and listen to this because they needed to understand the complexity of air operations, which we did not conduct in isolation – they needed to appreciate the intricacies of joint – international – planning. They also needed to recognise, and acknowledge, the risk factor, which was not insignificant, so that they should not be surprised if, one day, we were to lose half-a-dozen aeroplanes because something had gone badly wrong. It was a complete sell-out at the MOD and a lot of people approached me afterwards to say that they had had no idea of the complexity of what we did. So that had definitely been a worthwhile exercise.

But, that aside, from a personal perspective, the Ministers I was

dealing with at that time were George Robertson and John Reid and I had the greatest respect for both of them. They were open and above board, able to ask questions and willing to listen and learn. They were more interested in understanding what we could and couldn't do, rather than trying to tell me what to do. That was very evident during the run-up to the 1998 Strategic Defence Review when the retention of the Jaguar force was a contentious issue. At the time we were maintaining permanent, open-ended, commitments in both northern and southern Iraq while patrolling, and occasionally being involved in offensive campaigns, in the Balkans. To cover these commitments, we had three squadrons of Jaguars, three of Harriers and six of Tornados. That permitted us to operate a sensible cycle with one third of the force actually deployed in-theatre, one third recovering and the other preparing to deploy. In other words, we had a well-balanced force which was able to do what we were being asked to do. The Government was, as ever, looking for savings and George Robertson's 'special advisers' were urging him to withdraw the Jaguar from service and close Coltishall. There was no intention to reduce the commitment, of course, and that would have given us a real problem. Fortunately, common sense did prevail in the end but it had been a close-run thing.

SUMMARY OF MINUTES OF THE THIRTIETH ANNUAL GENERAL MEETING HELD IN THE ROYAL AIR FORCE CLUB ON 22 JUNE 2016

Chairman's Report.

AVM Baldwin noted that the recently published Journal 63 had contained the obituary of our late and founding President Sir Michael Beetham, who, along with Sir Freddie Sowrey, had been instrumental in launching the Society in 1986.

There had been two seminars since the last AGM. The first, at the RAF Museum in October, had looked at aspects of RAF maritime air since WW II, while the second examined 'Trenchard's 3 Pillars' (the apprentice scheme, the RAF College and the RAF Staff College) at Halton, the home of the apprentice scheme. Both were well attended and covered their costs. The autumn 2016 seminar, at Filton on Thursday 20 October would consider procurement issues during the Cold War era, while the spring seminar at the RAF Museum on Wednesday 12 April 2017 would probably cover the RAF Regiment.

The Society's finances had almost broken even in 2015 and there was a healthy balance of some £25,540. Accordingly, annual subscriptions would remain at £18 and seminar fees at £20 per head.

Concluding, the Chairman thanked the committee for their continued hard work, and expressed his appreciation of the support and encouragement of the Vice-President, Sir Frederick Sowrey. He further announced that Air Chf Mshl Sir Richard Johns was willing to undertake the office of Honorary President of the Society. Proposed by AVM George Black and seconded by Air Mshl Sir Frederick Sowrey, Sir Richard was duly elected President.

Secretary's Report.

Gp Capt Dearman reported that since the last AGM, membership had reduced to 660, but 30 of these had no known current address, and the banks refused to forward letters to account holders. Many of these were still paying the old subscription rate of £15, despite no longer receiving journals. It was evident, therefore, that the Society was inadvertently receiving funds from standing orders that should have been cancelled following change of abode or death. Members were therefore urged to ensure that appropriate arrangements were in place, for example in wills where joint accounts were in use.

Treasurer's Report.

Mr Boyes reported on the 2015 accounts. Despite the fall in membership numbers, the year had almost broken even with a loss of only some £250. Income of £18,922 was down on the 2014 figure, but expenses had also been reduced from £21,370 in 2013 to £19,172 in 2015. The nett cost of seminars had been reduced as a result of revised catering arrangements, and advantage had been taken of the fact that, with turnover of less than £25,000, the Society had been able to reduce the independent examiner's fee. Total funds at 31 December 2015 were £25,540 which the committee considered to be comfortable. Members were urged to ensure that an up-to-date gift aid certificate had been sent to the Treasurer.

A proposal by Mr Michael Meech, seconded by Air Cdre Tyack, that the accounts be accepted and that Mr Bryan Rogers be re-appointed independent examiner was carried.

Appointment of Executive Committee.

The Chairman noted that all of the main members of the committee were prepared to continue serving, while Mr Peter Elliott, recently retired from the RAF Museum, had offered to become a full member, and Dr Ross Mahoney had offered to replace him as the Museum representative in an *ex-officio* capacity. Wg Cdr J Grindlay had been posted, and Wg Cdr Stuart Lindsell had offered to take his place and represent the links with the Staff College. The other *ex-officio* members had all agreed to continue serving.

Air Cdre Tyack proposed, seconded by Sir Frederick Sowrey, that the executive committee be elected. The motion was carried and the executive committee members so elected were:

AVM N B Baldwin CB CBE	Chairman
Gp Capt J D Heron OBE	Vice-Chairman
Gp Capt K J Dearman FRAeS	Secretary
Wg Cdr C J Cummings	Membership Secretary
Mr J Boyes TD CA	Treasurer
Wg Cdr C G Jefford MBE BA	Editor & Pubs Manager
Air Cdre G R Pitchfork MBE MA FRAeS	
Wg Cdr S Chappell MA MSc RAF	
Mr P Elliott	

The *ex-officio* members of the committee were:

J S Cox BA MA	Head of AHB
Maggie Appleton MBE	CEO RAF Museum
Dr Ross Mahoney BA PGCE MPhil	
Gp Capt P Wilkins MA RAF	DDefS(RAF)
Wg Cdr S Lindsell BSc MA RAF	JSCSC

Discussion.

AVM Black, who had chaired the Halton seminar, highlighted his dilemma when two speakers overran their time limits and deviated from the subject matter by straying too far into the future. Noting the problem, the Chairman responded that this was a rare occurrence, not least because the Editor's guidance to speakers was concise and comprehensive. Nevertheless, he offered to reflect AVM Black's views in the journal if required.

In response to a question about the timing of seminars, the Chairman noted that timings were a tried and tested compromise and had been found to suit the majority of attendees.

Two Air Forces Award.

The President, Air Chf Mshl Sir Richard Johns, presented the Two Air Forces Award to Wg Cdr Paul Rait.

Air League Gold Medal.

Concluding the AGM, the Vice-President, Air Mshl Sir Frederick Sowrey presented the Air League's gold medal to Wg Cdr Jeff Jefford in recognition of his invaluable work as the Society's Editor.

In 1996 the Royal Air Force Historical Society established, in collaboration with its American sister organisation, the Air Force Historical Foundation, the Two Air Forces Award, which was to be presented annually on each side of the Atlantic in recognition of outstanding academic work by a serving officer or airman. It is intended to reproduce some of these papers from time to time in the Journal. This one was the winning RAF submission in 2015. ***Ed***

NORTH AFRICA AND NORMANDY IN WW II: PERSONAL RELATIONSHIPS AMONGST BRITISH SENIOR COMMANDERS

Wg Cdr Paul Rait

'We've been taken for suckers by Montgomery!' Air Chief Marshal Tedder, July 1944.[1]

'It's always "Montgomery's Army", "Montgomery's Victory", "Montgomery strikes again". You never say "Coningham's air force".' Air Marshal Coningham to journalists, 1944 [2]

'I readily admit that the decision to become the focus of their attention was personally enjoyable to me.' General Montgomery, 1942.[3]

Introduction

Arguably, the ability of the British to effectively integrate their army and air force to make them mutually supporting was the turning point in the war for them. The co-ordination of the two Services was borne out of bitter experience in the Western Desert and dependent on the personal relationships of the army and air force commanders. It was three men, Air Chief Marshal Tedder; Field Marshal Montgomery and Air Marshal Coningham, their egos, personalities and personal relationships that really ensured that Air-Land Integration (ALI) became the highly effective weapon that it did, but also ensured that it never achieved its full potential. This close co-ordination brought Britain its first significant land victory of the war, at El-Alamein, but by the time of the capture of Caen this relationship had soured to outright hostility.

The first part of this paper will outline the British ALI model developed in the Western Desert. It will then look at the importance of personal relationships, personality and ego in forging ALI in the

Western Desert. It will examine the role that external factors, such as professionalism, experience, the media, honours and awards as well as political manipulation played in shaping these relationships. Part one will conclude that ego, personality and the personal relationships between the three men were crucial to the success of ALI in the Western Desert. The second part will look at the personal relationships between the three commanders in Normandy. It will build upon part one's findings to demonstrate that, whilst relationships between the three commanders were poor and steadily deteriorating, this did not affect the practical delivery of ALI in Normandy.

ALI in the Western Desert

The British Western Desert model of ALI was borne from much bitter experience and prone to the influence of personalities. Whilst the Army and RAF were sufficiently co-ordinated for success against the Italians, the arrival of Rommel in 1941 brought a different experience. This period was marred by bitter recriminations between the Army and RAF Commanders over the use of air power. A vocal cadre in the Army wanted an Army Air Force at the call of the Divisional or Corps commander, as had been employed against them in the Battle of France. The RAF thought this impractical due to the numbers of aircraft required and was doctrinally opposed to using air power as flying artillery, focusing on interdicting the logistics chain rather than destroying tanks. This helps explain why the British arrived at their system of close air support.[4]

The victories and defeats of 1941 revealed a RAF unprepared for mobile operations[5] and an Army incapable of providing the RAF with up-to-date locations, hampering assistance by the inability to distinguish friend from foe on the ground. Some of these issues were rectified by equipment, others would take time and experience. In response to Army criticisms, Tedder insisted that all planning for air operations for Operation BATTLEAXE should be done in complete agreement with the Army's wishes. Even then, defeat still brought accusations from the Army of failure by the RAF despite little evidence of them calling on RAF support.[6] Tedder's view was that 'all three Services should make their big efforts in concert and not separately' and that 'there was no real co-operation between the Services and still less any concept of combined operations and yet the

Tedder and Coningham.

entire campaign "calls for staffs manned by officers with real knowledge and mutual understanding of the powers and limitations of the three Services".'[7] Tedder's solution was to re-organise the RAF into the Desert Air Force (DAF)[8] under the command of Coningham who had arrived that July at Tedder's request. One of Tedder's first directions to Coningham was for him to get together with his Army counterpart and create a joint HQ.

Tedder also proposed a review of air support by an inter-Service committee. The committee's findings and Coningham's trials resulted in the policy of Direct Air Support. The Army still wanted point protection against German dive-bombers and the situation reached an impasse. Churchill resolved the issue by directing in September 1941 that 'ground forces must not expect "as a matter of course" to be protected against aerial attack. Whenever a battle was in progress, the Army Commander must inform the Air Commander what he wants to happen and it was the responsibility of the Air Commander to decide how best to achieve this.'[9] The RAF in the Middle East was now organised to support the Army and Navy whilst also completing its own missions. The process for requesting and allocating aircraft was streamlined and virtually established with the arrival of the UK-trained No 2 Army Air Support Control unit, reducing the time from

request to arrival of air support to approximately 30 minutes.[10]

Operation CRUSADER, in November 1941 to relieve Tobruk, was the first test of the new system; it was also the first time that the Army and Air HQs were co-located. Whilst initially successful, Rommel's dynamic counter-attack was only checked by British armour supported by air power. Auchinleck wrote after the battle that a 'marked feature of operations to date has been our complete air supremacy and excellent co-operation between ground and air.'[11]

Rommel's next offensive on 26 May so comprehensively shattered the Eighth Army that the air support organisation ceased to function and the DAF was forced to act on its own initiative to prevent defeat.[12] Following this near disaster, Churchill and Brooke visited the Middle East to see for themselves what was wrong. Churchill sought Tedder's views, who was clear, 'I told him frankly what my views were […] the last failure in particular had shaken the faith of the troops in their leadership.' Tedder told Field Marshal Smuts a few days later that, 'Selection, promotion and removal of staffs and commanders must be based entirely on results, not on seniority, personal friendships, old school ties etc. Failures must be analysed and exposed, not, as invariably in the past, buried under many coats of whitewash.'[13] Alexander replaced Auchinleck, whilst General Brooke's favourite, Montgomery – a man with a genius for self-promotion[14] – took command of the Eighth Army.

Montgomery brought with him an immediate and infectious attitude towards winning the war, instilling a sense of purpose and direction in the Army,[15] impressing Tedder and Coningham. Montgomery endorsed the airmen's theory of close land and air co-operation at all stages of the planning and execution of a campaign, successfully putting it into practice at the battle of Alam Halfa in September 1942. At the third battle of El Alamein, army-air co-operation 'greatly exceeded that of all previous air-land operations.'[16]

The Importance of Personal Relationships

How much of the British success in the Western Desert was due to the personal relationships between the senior commanders? Up to 1942 Tedder and Coningham had cordial relationships with the various army commanders and solid progress was being made on ALI. Despite this, army officers still wanted their own air force, did not like

having their assumed leading role in the battle challenged and resented having to share operational authority with an airman.[17] Bucking this attitude was Montgomery who was quick to embrace the concepts espoused by Tedder and Coningham, particularly the co-location of Army and RAF HQs, something Tedder had told Coningham to do almost a year earlier.

Montgomery had abundant energy, self-assurance, skill and a reputation as a fine trainer of troops. Coningham's first impressions seemed promising, 'we now have a man, a great soldier if I am any judge, and we will go all the way with him.'[18] Montgomery appeared to meet Tedder's requirements for the next Army Commander as being 'alive and young, someone with fire.'[19] In September 1942, Tedder wrote to Smuts saying that Montgomery 'has brought the whole Eighth Army to life again. The effect has been electric, far more rapid than I had thought possible.'[20]

Montgomery endorsed the role of air power in the land battle, telling his subordinates that before a commander goes into the 'real battle he must "blitz" the enemy in the air and have his own air so far forward that good support and good cover will be given to the land operations. A vital essence is suitable airfields for the RAF . . .'[21] After Alam Halfa, Montgomery wrote to Coningham; 'It is clear to me that such magnificent co-operation can produce only one result – a victorious end to the campaign in Africa. Let our motto be: United we stand, divided we fall, and let nothing divide us.' Coningham congratulated him on winning the battle 'in such a flawless manner'.[22] But, by the time the Allies reached Tunis in 1943, relations between Montgomery and the airmen had soured perceptibly. Arguably, the root causes lay in the personalities of the three men and the influence of external factors.

Personalities

Montgomery was a determined and aggressive individual. Described as having few real friends in the Army he became even more of a loner following his wife's early death. Basil Liddell-Hart in late 1941 wrote in his notes on Army Command appointments that Montgomery 'is certainly one of our most vigorous and "toughest" generals, if he has some of the defects of his qualities.'[23]

He was widely regarded as 'vain, egocentric, self-righteous and

boastful'[24] and viewed as naturally arrogant. War Office officials described him as having a very shallow mind, using simple repetition to get his message across.[25] In August 1942, Tedder received a letter from Air Marshal Freeman, warning him not to trust Montgomery, saying he was 'a good tactical schoolmaster' but 'small-minded – and nearly had a mutiny in his regiment when he commanded it. He might do well, for he has energy – but he talks balls – is conceited, a hard worker and a cad.'[26]

Montgomery regarded himself as a military genius but he had more resources than any previous commander and never acted quickly. His desire to be seen as the perfect commander meant that he was unable to admit mistakes and fame made this worse. Hastings acknowledges that Montgomery had a certain 'lack of concern for the truth in his make-up' and D'Este agrees that 'the past existed only to serve the convenience of the present.'[27] Montgomery was relentlessly self-aggrandising and obnoxiously insistent on his own infallibility.[28] Montgomery's battle at El Alamein did not go according to plan, but by insisting that it did he gained a reputation for infallibility, whilst his peers did not give him credit for his skill in reshaping his forces to meet the changes. Liddell-Hart observed that Montgomery had a tendency to rubbish all those who went before him in order to highlight the great changes that he made.[29] He did this with Auchinleck and Dorman-Smith, re-writing the state of the Eighth Army when he took over to make his achievements look better.[30] In his diary he wrote about Army-RAF co-operation,

> 'I gather that there had been very close touch in the past. But the arrival of Auchinleck and Dorman-Smith at Army HQ seems to have altered that; the RAF had no use for either of these two, and Army HQ and Air HQ and the two staffs seem gradually to have drifted apart. I decided to remedy this at once and moved Army HQ back to Air HQ and brought the AOC and his senior staff officers into my Mess. This was a good move, and from then on we never looked back.'

Montgomery sacked those original Eighth Army officers that had not been part of the 2nd Corps team in France to make space for his men, causing great resentment, with General Lumsden, former Commanding Officer of X Corps, telling people back at the Cavalry

Club what a shit Montgomery was.[31] Montgomery publically dismissed the efforts of the old Auchinleck team claiming that their plan would not have worked when this was clearly not the case. 'I changed the plan completely and Rommel was seen off. I did not know him; he must have been a fine fighting General.'[32] Liddell-Hart, writing to the journalist and author R W Thompson on 20 January 1965, agreed that Montgomery was 'not a great General' and failed to make the most of the remarkable opportunities that came his way.[33]

It also seems that he was unable to take advice. In a letter to Brigadier F E W Simpson dated 19 November 1942 he states that he has been given much advice from 'lunatics who sit in war rooms completely out of touch with realities, and who try and plan what I ought to do. A good many of these are of the RAF.'[34] Montgomery 'was intolerant of opinion which opposed his own.'[35] Brooke was forced to give his protégé advice to ensure that he did not say or do things that would upset others, describing him as 'a difficult mixture to handle, brilliant commander in action and trainer of men, but liable to commit untold errors, due to lack of tact, lack of appreciation of other people's outlooks.'[36] Montgomery thought he was a plain speaking man, to everyone else he was arrogant, but often there was more than a grain a truth to what he said.

Tedder's tutor at Cambridge described him as 'a thoroughly nice fellow in all ways: modest, pleasant, sensible. He seems to me to be much more thoughtful than many men of his age, anxious to form a real opinion of his own and to do it by carefully weighing the pros and cons.'[37] Churchill's doctor, Sir Charles Wilson, thought Tedder was quite unlike any other officer he had met, with 'a quick mind and a sharp tongue.'[38]

Churchill came to admire Tedder's qualities, even if he never liked him. Tedder's standing amongst his peers was immense. Following several defeats in the desert, Churchill found Tedder's calm practical signals deflating and in October 1941 decided to sack him. Portal, Freeman, Auchinleck and even Archibald Sinclair, Secretary of State for Air, said they would resign if this happened; with Auchinleck saying 'for the good of the Army' he hoped that Churchill would not insist.[39] Harold Macmillan, who was a political advisor in Eisenhower's HQ in January 1943, wrote that Tedder was, 'a most interesting man. He has the rare qualities of greatness (which you

Tedder and Churchill, August 1942.

can't define but can sense). It consists partly of humour, immense common sense, and a power to concentrate on one or two simple points. But there is something more than any separate quality – you just feel it about some people the moment they come into a room. And Tedder is one of those people about whom you felt it.'[40]

Sir Robert Bruce-Lockhart, Director-General of the Political Warfare Executive thought Tedder was 'the most naturally and mentally best equipped commander I have ever met.'[41] General Omar Bradley described Tedder as 'one of the United Kingdom's most outstanding men'. Tedder was an anomaly among RAF senior leaders in that he was 'consistently willing to take a joint Service perspective rather than follow the narrow prejudices of his own Service.' [42]

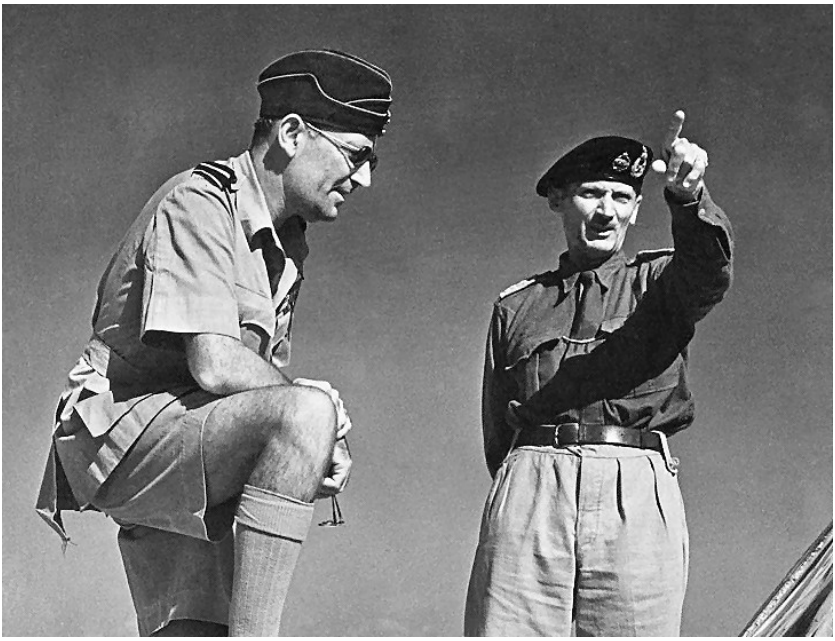
Not everyone viewed Tedder this way. Brigadier Richardson, Montgomery's LO to Air HQ described Tedder as a brittle intellectual, and found him 'misguided, academic, vain and conceited – therefore, he was upset by Montgomery's personality.'[43] Whilst Hastings asserts

that Tedder's arrogant self-assurance was matched only by Montgomery's.[44]

Tedder could be ruthlessly professional when required, as his advice to Churchill in June 1942 about Auchinleck shows. Equally, on 12 February 1942, following a series of newspaper articles by retired generals blaming the Army's failures on the RAF and advocating an Army Air Force, he wrote to Sinclair saying, 'You should know that the RAF in the Desert realise that they have saved the Army, both in the recent advance and the withdrawal, and naturally resent any suggestion that the Army should control them.' The spirit of the RAF personnel was 'give us some tanks and we will stop this retreating if the Army does not wish to fight.' [45] Tedder was particularly harsh with Coningham following an outburst that appeared to criticise, in public, the performance of American troops in Tunisia. He was slow to forgive Coningham for this, which could have had serious repercussions for the Anglo-American war effort in Europe.

Coningham was described by Liddell-Hart as the real hero of the Desert War; he was everything that Tedder wasn't: decorated, stylish, had presence and wide experience.[46] He possessed 'immense energy and rare powers of leadership,' was one of the chief architects of army-air cooperation, and one of the outstanding air commanders of the war.[47] He had a talent for organisation, turning Tedder's ideas into practical reality as in the Western Desert. Eisenhower regarded him as 'impulsive, quick, earnest and sincere. He knows his job and under the British system of cooperation, performs it well.'[48]

Behind Coningham's soft-spoken and intensely charming manner, he was ambitious and ruthless, rarely bothering to conceal his contempt for other commanders. He enjoyed fame and attention as well as the finer aspects of life. Coningham's behaviour was often boorish, expecting his ideas to influence the actions of others. Coningham's ego and forceful and impatient nature could get the better of him and lead him to rash decisions and words. General Sir Charles Richardson, a staff officer in Montgomery's HQ described Coningham as having to be 'handled with kid gloves' and that he was 'very bloody minded under the old (Auchinleck) regime but was encouraged to play. But we all knew – I knew because I was in the middle of this – we had to be frightfully careful not to have one of these outbursts of frightful prima-donna-ish behaviour.'[49] Even Tedder



Coningham and Montgomery.

commented that Coningham was 'at times rather a Prima Donna.'[50] Coningham felt that Montgomery had stolen laurels away from himself and his air force after El Alamein. When Montgomery became a household name, things went wrong, as the ambitious Coningham felt slighted. From that point relations deteriorated to such an extent that Montgomery would try and by-pass Coningham causing further frustration and leading to an even greater decline in their relationship.[51]

Breakdown in Relationships

The cause of the breakdown in the relationship between the airmen and Montgomery appears to be rooted in Montgomery's boastfulness after El Alamein. Montgomery's inability to exploit his success on the battlefield appears to have been the source of Tedder's loss of faith whilst Coningham's, sharing Tedder's views, appeared more to do with being denied the recognition that he felt he and his air force deserved. Equally, there is the view expressed by Major General Dorman-Smith that the breakdown was inevitable due to Service

differences. In a letter to Corelli Barnett he stated that the Army was not trained to think, it was a fault of the peacetime system and that 'anyone who bothered about "Generalship" (as I did for a hobby rather than for use) was wasting his time in a vacuum.' He goes on to claim that the Army was more interested in social status and connections, the commanders were 'all gallant men, but terribly stupid and slow to react intelligently,' finishing with, 'it might be said of the British Army that it fears nothing except its brains.' In his opinion, RAF officers were more intellectually prepared for the war.[52]

Montgomery's ego was certainly starting to grow due to his success, but also due to the disproportionate praise heaped upon him. In his diary, he claimed that 'Alexander took no part whatever in the planning and conduct of operations . . .' further stating 'and especially did I learn how to combine the power of the Army on the ground with the power of the RAF in the sky, and to so knit the two together as to constitute one fighting machine . . .'[53] Even Admiral Cunningham, CinC Mediterranean Fleet, commented to Admiral Ramsay, 'I am afraid that Montgomery is a bit of a nuisance; he seems to think that all he has to do is say what is to be done and everyone will dance to the tune of his piping.'[54]

The decline in relationships seems to stem from the frustration that Tedder and Coningham felt when Montgomery did not follow up the Alam Haifa victory quickly, thereby missing an opportunity to defeat the Axis.[55] The airmen knew that the Germans only needed to get one or two re-supply convoys through the British Mediterranean blockade to give Rommel the fuel that he desperately needed for a counter-attack. On 4 November 1942, Tedder visited Montgomery, emphasising the need for haste as the RAF or Navy might not sink every Axis supply ship. Montgomery insisted that there was no chance of any movement for at least 10 days. Half an hour later he came back and stated that he had new information about the enemy's dispositions that would allow him to resume the advance immediately. Tedder wrote:

> 'Advice he will not take, even that from Coningham, who knows the desert better than any of them, but fortunately he will quite often use that advice. That the great ideas should come from the great man himself matters little, provided they are

acted on.'[56]

Montgomery's view was: 'On arrival in Egypt I had been told that Tedder was always trying to tell the Army how it should fight its battles, but I personally found no sign until we captured the Martuba airfields for the DAF. It was certainly a curious message to send a land army that had just won the greatest victory a British Army had yet won in the war!'[57] Liddell-Hart made the point about Montgomery that 'until Alamein he was quite capable of accepting ideas from outside, and quite frequently acknowledged the source.'[58]

Tedder's frustrations and proposed operational moves were echoed by Rommel:

> 'The British Commander risked nothing in any way doubtful, and bold solutions were completely foreign to him […] I was quite satisfied that Montgomery would never take the risk of following up boldly and over-running us as he could have done without any danger to himself. Indeed, such a course would have cost him far fewer losses in the long run . . .'[59]

This failure to pursue Rommel vigorously after Alamein meant that Rommel was able to reconstitute his army, as the brains and nervous system were left intact, leading to a lengthening of the entire campaign.[60]

Montgomery's timidity in pursuing Rommel is understandable. He had never commanded in the desert before or any force of that size, but he did understand that Churchill and the British public needed victory after so many defeats. Nigel Hamilton, Montgomery's official biographer, argues that the RAF was afraid of the *Luftwaffe* and its refusal to bomb further west than El Alamein prevented any follow-up on the retreating Axis forces, hiding, instead, behind requests from the Army for fighter cover.[61] This is rebutted by Coningham's actions on 13 November 1942 when he sent his squadrons to advanced landing strips some miles behind the retreating enemy, in order to attack them more effectively. Liddell-Hart observed that 'Montgomery was receiving a lot of criticism at home from his fellow officers for unconformity as to how an officer should behave. Therefore, he is being over cautious for if he makes a bad slip they will drop him like the proverbial "ton of bricks". Whereas, if he merely misses

opportunities, by conforming to the tactical system they uphold, they will have no such excuse.'[62] Dorman-Smith wrote to Barnett stating, 'He (Montgomery) ran true to form from my staff college days, a sledgehammer to crack a nut was his forte. Also, rightly too, he had one eye cocked on Churchill. He had bamboozled him in August (more booze than bam perhaps) and it was necessary for him to succeed spectacularly at Alamein.'[63] The real reason why there was no pursuit was because the Army's armoured formations were unable to match their German foes.[64] Montgomery did not have confidence in his Army's ability to engage Rommel's in open country, 'the standard of training for Eighth Army formations was such that I was not prepared to lose them headlong into the enemy.'[65] He did not know the capabilities of his commanders and how his supply system would work.[66]

The Making of a National Hero

After Operation CRUSADER, the media goaded the Army for its poor performance in the war writing that the Army High Command was staffed by 'blimps and boneheads, barren of strategical conceptions, thinking in terms of the last war, devoid of powers of leadership and incidentally of guts.'[67] Whilst unjust, the Army had spent the last three and a half years blaming everyone else for its failures. The *Evening Standard*'s military correspondent, Frank Owen, claimed that the British Army did not know how to fight and win modern battles stating that success in battle depended on inter-Service co-operation, not with them acting as ancillaries to one another, a conclusion that he had reached after reading a captured German tactics manual[68] a point Tedder had made a year earlier.

Opinions undoubtedly shaped egos and influenced personal relationships. Prior to Montgomery's arrival, there had been many articles about RAF successes in the Desert, and about Tedder's and Coningham's leadership. The RAF had done a great deal to raise the morale of the average soldier and this was well known.[69] Montgomery was very astute at courting the press and seems to have been quite happy to have walked away with all the glory. Shortly after his arrival in North Africa, previously excluded journalists were actively encouraged. The army public relations staff excelled themselves arranging the first of three years of 'random' encounters. All this

Montgomery.

would have been profoundly distasteful, even if it had been necessary, to any man not abnormally vain. As he said himself, 'I readily admit that the decision to become the focus of their attention was personally enjoyable to me.'[70] Montgomery, like Coningham, craved publicity and recognition and deliberately developed a distinctive image.[71] When the British entered Tripoli on 23 January, Admiral Power noted in his diary, 'BBC shouted all day about Montgomery and Tripoli, but of course the RAF did it all.' The German commander, Kesselring, thought that the British should have been there a month earlier given their numerical superiority in men and equipment. Montgomery made sure that Coningham was nowhere to be seen when he accepted the formal surrender of Tripoli and conducted a victory tour in front of the press.[72] This angered Coningham whose enjoyment of such occasions was apparent when Alexander invited him to accompany him in his white Rolls Royce for the victory tour of Tunis.[73]

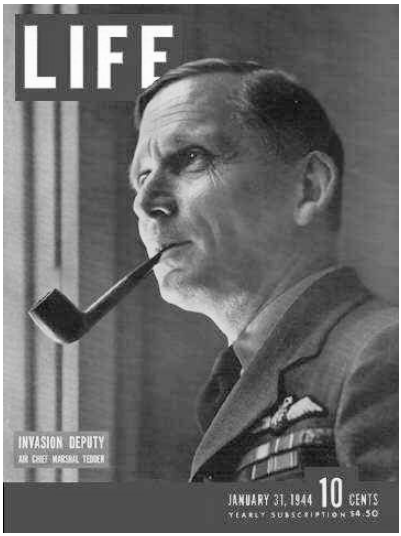
The Montgomery brand was carefully cultivated. On a trip to England, ostensibly for rest, he took his personal photographer and press agent, briefed the Canadians on Operation HUSKY, took tea at Buckingham Palace and was mobbed when he went to the theatre.[74] Montgomery employed a personal press agent, Captain Keating, whose job was to control the media and was the brains behind the hugely popular propaganda film 'Desert Victory'. Eisenhower's diary keeper, Commander Butcher, claimed Keating had said to him 'England had no hero so he set out to make one and Montgomery was now "it".'[75] Victory at El Alamein had saved two reputations, the British Army's and Churchill's and made two, the Eighth Army's and Montgomery's.[76] As Montgomery's Chief of Staff, Freddie De Guingand commented:

'It was extremely interesting to meet my chief again after his

> visit to London. I noticed a subtle change. He had left for Egypt as a General comparatively unknown to the British public, and had found on return to Britain that he had virtually overnight become a national hero. He received a tremendous ovation wherever he went; in the theatre, stepping in or out of the War Office crowds would shout "Good old Montgomery!" "God bless you, Montgomery!" Walking across the Horse Guards Parade to his Club he would be followed by hundreds of his fellow countrymen, all pressing forward to shake his hand or at least get a glimpse of him. What all this must have meant to a somewhat lonely man is easy to understand. Not to have enjoyed it would not have been human. He did, and sometimes asked for more. It was a good thing for the Army, which had sunk so low in the public's esteem. It needed this favourable reaction – and it needed a successful General. The main changes which I noticed were: firstly, Montgomery had, perhaps lost a little of his simplicity, and, secondly, he now realised that he was a real power in the land and that there were few who would not heed his advice. In fact, he realised that in most cases he could afford to be really tough to get his own way!'[77]

Montgomery understood the importance of publicity to communicate to his troops and raise their morale. After El Alamein he told his Army that, 'this achievement is probably without parallel in history.'[78] At home it was treated as the greatest victory since Waterloo allowing Britain to retain self-respect in the eyes of the US.[79] The Eighth Army began to view itself as an elite force. At the Tunis victory parade, Churchill told the Eighth Army that they were now world famous and that their victories 'would gleam and glow and will be a source of song and story long after we who are gathered here have passed away.'[80] Montgomery was 'a gifted commander who understood the limitations of his troops and generally refused to take risks that would expose their weaknesses.'[81] He ensured that the Eighth Army never lost a battle, maintaining their morale as well as his reputation.[82] The Eighth Army believed in itself again, which was exactly what was required.[83]

Even on the medals there was elitism. Those who had served in the



Tedder on the covers of Time*, 9 Nov 42, and* Life*, 31 Jan 44.*

Eighth Army after 23 October 1942, when Montgomery assumed command, received a bar to their Africa Star. This caused much bitterness and resentment that rumbled on well into the 1960s. Montgomery was regarded by most of the old desert hands as an intolerable little man.[84] There was concern at the Allies' Algiers Headquarters that Montgomery was hogging the media limelight to the irritation of others. Eisenhower's press aide, described Montgomery as a 'glory grabbing General' who was 'riding a wave of popular acclaim and seems to think he can't do wrong.' This perception of Montgomery meant that any obstinacy on his part, based on sound military grounds, appeared as vanity rather than logic or experience.

Whilst Montgomery was being actively courted by the Prime Minister, the British media and others, Tedder appeared on the front cover of the US *Time* magazine in November 1942. Under the heading 'Tedder of North Africa,' he quickly became one of the few British officers known by face and name to the American public. The article was full of praise and made Montgomery appear a supporting act to the airman.[85] Tedder also appeared in *Life* magazine before Montgomery did, a photo of his head and shoulders taking up the

entire front cover, inside was a fulsome article with five photographs.[86]

Churchill's careful manipulation of the victory at El Alamein also needs to be seen in context. He desperately needed success to keep him in office but also to demonstrate to the USA and the Empire that the British Army was not beaten.[87] Even complimenting Rommel as a formidable opponent was designed to draw some of the sting from the recent defeats experienced by the British Army at his hands, as Egypt was considered second only to the UK in terms of defence; 'lose Egypt and we lose the war.'[88] The RAF and Royal Navy had both had spectacular successes, only the Army was a failure, which helps to understand why Churchill singled out Alexander and Montgomery.

Even his famous quote about the battle actually starts "*It might almost be said:* Before Alamein we never had a victory, after Alamein we never had a defeat.' These opening words were generally omitted and Churchill had an interest in continuing this mis-quote as he had gone to Egypt and sorted out the command problems.[89] There are alternative views on why Churchill was keen to promote Montgomery's success. In a letter to Liddell-Hart dated 17 May 1965, Thompson enclosed an extract of a letter from Sir Desmond Morton, Churchill's personal assistant, to Thompson dated 15 May 1965. In it Moreton states,

> 'Montgomery got the Overlord job for several reasons. Largely because he had worked up the press over his 21st Army Group job.' The Americans madly wanted Alexander in the job as the African supremo, who had devised the tactics, 'for which Montgomery took, and the press gave him, the credit.' 'Then again (hush hush) Winston recognised early in Montgomery a man who could be made to think like he did, and yet who was biddable enough to do what Winston wanted. Winston saw sufficient of himself in Montgomery, but a lesser man. If I say that Winston was terrified of Alex, it is but a word of slight exaggeration […] Montgomery could be handled.'[90]

Following victory at El Alamein, significant honours were awarded to Montgomery and Alexander, but initially nothing for Tedder or Coningham. Sinclair eventually wrung out of Churchill a GCB for Tedder, not for El Alamein but for his service in North Africa. Tedder

had already done rather well from his time in North Africa, being promoted as well as receiving other honours. For him, real recognition was to come from other quarters such as Lord Trenchard who told Tedder, 'You were the power behind the whole operation.'[91] On hearing about the proposal to post Tedder back to the UK, Churchill said, 'It seems quite impossible to move Tedder from the Middle East until the great operations in Tunisia and Tripolitania are completed. No one has his knowledge, connections or influence.'[92] Many newspapers printed articles on the importance of air power at the battle of El Alamein. In Coningham's camp, the atmosphere was bitter. Air Commodore Tommy Elmhirst, Coningham's Chief of Staff wrote in his diary on 12 November, 'Montgomery got his "K" yesterday and a step up in rank. We in the Air Force are depressed that Mary did not get something for the 16 months he has fought here so brilliantly.'[93] On 23 November, Coningham was informed that he had got his knighthood. Exactly what Coningham thought about the issue of Honours and Awards post Alamein is not clear. What is known is that he was very clear in his direction to his subordinates about ensuring that honours were used to recognise the efforts of others. Thus it is not unreasonable to make the assumption that he held such awards in high esteem and that he craved them.

The Impact on ALI in the Western Desert

The decline in relations between the airmen and Montgomery seems to have had little real impact on the delivery of ALI. Montgomery was not at his worst by this stage of the war and there were no other major battles in the pursuit to Tunis. The airmen seem to have felt that whilst annoying, he was bearable and neither was so unprofessional as to allow Montgomery's ego and personality to interfere with the prosecution of the war. Once Tunis had fallen, the DAF combined with the Allied Air Forces used in Operation TORCH to form the North African Tactical Air Force (NATAF) and here the importance of personality, ego and personal relationships really showed. During this final phase of the war in North Africa, Montgomery was served by Broadhurst who was very similar to Coningham in style, 'bold, original, creative and totally unawed by Service orthodoxy.'[94] His application of air power, at a crucial time when Montgomery's attack on the Mareth Line in Tunisia had

faltered, allowed Montgomery to adjust his attack and retain his unbeaten record, from then on Broadhurst was Montgomery's favourite airman.[95]

Tedder's and Coningham's action in gripping the Allies' air forces in North Africa is a good example of the importance of personal relationships affecting operational outcomes. Soon after taking command of all the air forces in the Mediterranean, Tedder discovered that the situation between the Allies in North Africa was similar to the British in the Western Desert in 1941. Unlike his British Army counterparts, Tedder had excellent working relationships with the Americans, both Army and Air Force, quickly grasping the fact that Britain was a vital, but junior, partner of a coalition in which he was a key commander.[96] From his first encounter with them he stressed that if he was to command them then they would be one team – us. Coningham was promoted to air marshal and given command of the new British/American tactical air forces, immediately establishing a joint headquarters with Alexander who was now General Eisenhower's deputy. This change in command style, relationships and force of personality revolutionised air support to the Allies bringing it up to the standard of the DAF. Arguably, the greatest testament to the importance of personal relationships in delivering ALI came from Montgomery, who wrote to Brooke on 28 February, inviting him to send senior officers out to North Africa for instruction on how to co-ordinate the actions of an army and an air force to 'see teamwork at a HQ' as 'they will never learn these things in England; they would like to, but they cannot as it is all theory; here it is all practical.'[97]

Normandy

Upon returning from the Mediterranean to conduct the planning for the invasion of Europe, Montgomery foresaw friction between the RAF and Army, realising that there was a clear division between the army and air force officers who would plan and lead the invasion. He stressed the importance of acting as one entity as the only way to ensure success.[98] Integral to success was air support. The system in Normandy was ostensibly the same as that used in North Africa and had proven sufficiently adaptable to different circumstances. The weak link was the overly complex air chain of command the Allies

Tedder and Eisenhower.

created that only increased the frictions between Montgomery and the airmen. The bad feeling that had developed in the Western Desert would come to a head in Normandy where relationships between the commanders would be critical to overall success.

Sinclair and Portal championed Air Chf Mshl Sir Trafford Leigh-Mallory as the commander of the Allied Expeditionary Air Forces (AEAF) for the invasion. Coningham, as Commander of the British Tactical Air Force and along with his American counterpart, General Brereton, would be placed under the command of Leigh-Mallory. Heavy bombers would be required to support the invasion but both the head of RAF Bomber Command, Air Chf Mshl Sir Arthur Harris, and his USAAF counterpart, General Carl Spaatz, refused to work, even temporarily, under Leigh-Mallory for the invasion, but both agreed to work under Tedder, who was now Eisenhower's deputy. Churchill's opinion was that all invasion-related air power should be placed under the command of Tedder, describing him as the 'aviation lobe' of Eisenhower's brain, who 'must be allowed to use all air forces permanently or temporarily assigned to Overlord' as he thinks best.[99] Portal accepted this proposal, leaving Leigh-Mallory as the emasculated head of the AEAF and Coningham as commander of the Tactical Air Force. It was agreed that Coningham was the man with whom Montgomery should plan air matters. Montgomery would exploit the confused air command chain to his advantage over the coming months by dealing with Leigh-Mallory for bomber support and Coningham's subordinate, Broadhurst, for tactical air matters, thus avoiding having to deal with Coningham.

Leigh-Mallory.

Personal Relationships

The confused Allied air command and control arrangement would heighten tensions amongst the senior British Commanders. Leigh-Mallory was an awkward character whose aloofness and distance from others was often mistaken for arrogance or, in the case of the OVERLORD team, ineffectiveness. He had 'no sand in his boots'[100], he was not part of the old North Africa team. Tedder had a low opinion of Leigh-Mallory, 'I told Leigh-Mallory that he was in danger of leading the Army up the garden path with his sweeping assurances of help […] I felt that the limitations of air support on the battlefield were not sufficiently understood; neither was the full scope of the role of air outside the battle area sufficiently appreciated by the Army, or by Leigh-Mallory.'[101] Coningham's seems to have been formed possibly as a result of Leigh-Mallory's scheming against Air Marshal Sir Keith Park, a fellow New Zealander, during the Battle of Britain. Montgomery initially viewed him as a 'gutless bugger' but this changed after Leigh-Mallory attempted to secure the bomber support that Montgomery wanted to break the deadlock around Caen: 'When planning in England, we did not think very highly of Leigh-Mallory,

but we all agree now that he is the only 'Air-Lord' who will do anything to help the army win the war; and he is completely genuine and sincere.'[102]

Whilst conventional thinking is that Montgomery was at fault in the dissention with the airmen, D'Este asserts that nothing could be further from the truth. Whilst there was clear animosity between all three, Montgomery realised fully the vital requirement for maximum co-operation between air and ground forces. He wrote to his three Army Commanders before the invasion stressing to them the importance of co-ordinating their activity with their air forces. Indeed, Montgomery's direction to General Sir Miles Dempsey in 1944 was that the 'Army HQ must never plan a move of HQ without first consulting Air HQ. The deciding factor in the location of the Main Army will be whether it will suit Air HQ,' [103] but Montgomery was hardly ever at Main, preferring instead the solitude of his Tactical HQ. Wing Commander Scarman (later Lord Scarman), Tedder's senior staff officer, wrote on 22 June 1944, 'the principal which worked in the Mediterranean – of the army and air commanders living together had been allowed to lapse.'[104] This was due partly to poor communications at Montgomery's HQ but also because there were few Allied airfields in Normandy at this stage. Despite his protestations to the contrary, Montgomery seems to have done little on a personal level to remedy these poor personal relationships.

Tedder and Montgomery worked together on the planning for D-Day in the spirit of co-operation and relative harmony, but after the invasion, relations fell apart again and Tedder became Montgomery's most vocal critic at SHAEF.[105] Remarks about Montgomery revealed the bad feeling in the British command network. Tedder said to one US general 'It is bad form for officers to criticise each other, so I shall!' He added, 'He is a little fellow of average ability who has had such a build-up that he thinks of himself as Napoleon. He is not.'[106] Tedder may not have liked Montgomery, but he was too wise and good to deliberately misrepresent him and in so doing endanger the lives of thousands of men and 'put in jeopardy the whole war'[107] – he was far above such personal vanity.[108]

Tedder brought Coningham into the Normandy team partly due to his experience but also because he knew how to ensure that Montgomery made best use of the air forces.[109] Coningham knew how

Coningham also made the cover of Time *– on 14 Aug 44.*

to influence Montgomery and get him to change his mind, having viewed first hand his reluctance to take advice from others; it needed to be his idea. This rapidly became increasingly difficult, as relations between the two men deteriorated. Forrest C Pogue, the American historian, interviewed Coningham after the war and found him the 'bitterest critic of Montgomery I have heard speak.'[110] Hastings argues that Coningham's refusal to work with Montgomery and the army was astonishing and it is remarkable that he was not sacked.[111]

Coningham's reputation with Montgomery's staff was equally not good. Officers at Montgomery's Tactical Headquarters such as Major Johnny Henderson regarded Coningham as a 'snake in the grass and plays dirty games behind the army's back. He will not co-operate. This is not helped by the fact that Coningham and Leigh-Mallory do not get on'.[112] Brigadier Charles Richardson, Montgomery's Liaison Officer at Stanmore, thought Coningham 'was a bad man, a prima donna […] frightfully affected, hot on choosing his next Chateau! We distrusted him completely and I was with him with the Air Barons at Stanmore, I recognised him as a bastard . . .'[113]. Montgomery described Coningham as 'a very jealous person and I am beginning to feel he is anti-Army […] not a loyal member of the team – untrustworthy, no-one likes him. I thought Tedder was alright, but from what the CIGS said I have now certain doubts.'[114] Montgomery's supporters warned him about the airmen but also stoked the situation; James Grigg, Secretary of State for War, was one of them, he wrote, 'those bastard Yanks are beginning to crab Montgomery. It is an absolute outrage because I know for a fact that the plan is working out as he designed it from the beginning. But our own journalists fell into the (SHAEF) trap and I am afraid that some

Broadhurst in his personal Fiesler Storch, with Portal in the back seat.

of our own jealous airmen help too.' A few days later he wrote to Montgomery 'I am convinced that Coningham is continuing to bad name you and the Army and that what he says in this kind is easily circulated at SHAEF via Tedder . . .' 'You will have no comfort until you have demanded and obtained the removal of Coningham from any connection with OVERLORD whatever. He is a bad and treacherous man and will never be other than a plague to you.'[115]

Amongst this acrimonious backdrop, the key appointment of Commanding Officer 83 Expeditionary Air Group, that provided 21st Army Group with tactical air support, was Broadhurst. Unwanted by Coningham, who was powerless to prevent his appointment,[116] Broadhurst had established an unusually happy rapport with Montgomery in the desert. In contrast to Coningham, Broadhurst set up his Headquarters in Normandy soon after the invasion being an almost daily and popular visitor to Tactical Headquarters. Yet, even to him 'Montgomery became more and more isolated.'[117] Broadhurst considered the poor relationship between Coningham and Montgomery as counterproductive and tried to lessen the impact wherever possible. Whilst his good relationship with Montgomery was hugely beneficial to the campaign, it did bring him into conflict with his own Service,[118] being greeted on one occasion by Tedder with the comment, 'How's your bloody Army friend today?' His reply was, 'Well, what do you expect him to be, my enemy? It's difficult enough

when he's supposed to be friendly.'[119]

In Normandy, Coningham never grasped that he was no longer Montgomery's equal as had been the case in the desert; therefore, it is hardly surprising that Montgomery turned to Broadhurst whom he could control. Interestingly, in the post-Normandy honours list there was not a single RAF one-star from AEAF, whilst there were many Army officers. This caused considerable resentment. Montgomery pushed for a knighthood for Broadhurst, but Tedder and the Air Ministry resisted this preferring instead to keep the nomination for a later award.[120]

Deepening Cracks

Within the first few weeks after the invasion new cracks in relations had appeared. The ability to capture or construct airfields in Normandy had been a deciding factor in selecting it as the invasion point. These airfields were considered vital as the relatively short range of the RAF's fighter-bombers meant that best use was not being made of them whilst they operated from England.[121] Tedder wanted the aircraft operating from Normandy as soon as possible and to get Coningham in there to control them for obvious reasons. But, according to Lieutenant-Colonel Christopher Dawnay, Montgomery's Military Assistant, Montgomery deliberately gave the RAF 'a totally false impression […] as to when he was going to get those airfields, south of Caen.' Once in Normandy, Montgomery 'didn't give a damn about those airfields.'[122] Lamb asserts that there was even the use of a second 'unrealistic' phase map to assuage the concerns of the RAF. When the campaign faltered around Caen, Montgomery's critics used his promise of airfields and the map as ammunition to go after him.[123] After the war, Tedder confirmed to Liddell-Hart that the understanding at SHAEF was for Montgomery to push right through which, 'would at long last have begun to give us the airfield country south of Caen, which had been one of the original objectives.'[124]

Tedder, Coningham and Leigh-Mallory were increasingly frustrated and apprehensive with Montgomery's slow progress around Caen, but so too was Eisenhower and the press. Coningham's hostility was becoming an obsession and was increasingly unhelpful at this crucial time.[125] Leigh-Mallory had turned down Montgomery's plan to use the British 1st Airborne Division to break the deadlock around

Caen and there was strong criticism from Coningham who 'asked for a greater sense of urgency from the Army and a frank admission that their operations were not running according to plan.'[126] Tedder has been accused of a vendetta against Montgomery following his failure to capture airfields. Whilst this is doubtful, it is certainly true that he felt that Montgomery was not aggressive enough and should either change his tactics or be replaced by someone more determined. When Operation GOODWOOD failed to break the deadlock around Caen, even after the use of heavy bombers in support of the army, Tedder felt he finally had what he needed to get Montgomery sacked and he urged Eisenhower to replace him.[127] Tedder clearly overstepped the mark when he told Eisenhower that the British Chiefs of Staff would not object to Montgomery's removal. Butcher, Eisenhower's diary keeper, thought that the British media had made 'Big Chief Wind' fireproof, even in the face of a disaster.[128]

Towards the end of June 1944, Montgomery was up to his old trick of blaming others for his failures. He sent CIGS a telegram outlining his concerns with the Air Barons 'jealousies' and that due to them, he might not get full value from the air power available to him. 'Mary Coningham spends all his time trying to get Leigh-Mallory to trip up and putting spokes in his wheels; he would prefer to do this rather than winning the war quickly; he does know his stuff, but he is a most dangerous chap.'[129]

Once again external factors played their role in widening the rift at the top. The British press, understandably, continued to play up Montgomery's role in Normandy, as the country had its pride at stake. What seems to have annoyed Tedder most was that the need for a hero was getting in the way of the truth and more importantly winning the war as quickly as possible. When Bradley finally broke out of Normandy, Montgomery took more than his fair share of the glory and was encouraged to do so by Brooke, the BBC and the British press. This boasting was 'laying the seeds of a grave split between us and the Americans,' wrote Tedder to Trenchard on 5 September 1944. 'At the moment they are being extraordinarily reticent and generous (due in no small measure to Eisenhower's very fine attitude over the whole business) but sooner or later they will come into the open and if the British public believe all that they are being told now, they will not like being told a very different story by the Americans. It is a

Eisenhower and Montgomery – on a good day.

dangerous situation and may become a tragic one.'[130] Fervent reporting in the British media had led to a wide-held belief that Eisenhower was the political head of a Montgomery-led invasion. Eisenhower had long tired of this, having written in his diary on 7 February 1944 that 'the bold British Commanders of the Mediterranean were Sir Andrew Cunningham and Tedder.'[131] Once again, Montgomery was unable to admit that events since D-Day had not gone according to plan as Brigadier Ford, Chief J2 at SHAEF, noted in a conversation with Chester Willmott.[132] With the criticism in the press mounting against Montgomery and for the sake of Allied unity, Eisenhower inadvertently assisted with the Montgomery legend by holding a press conference in London to take the pressure off Montgomery. With Tedder next to him, he described Montgomery as 'one of the great soldiers of the war.' Churchill subsequently declared, 'Nothing could have been more straightforward, courteous and fair to us.' The next day, the press had their news story, Churchill had made Montgomery a Field Marshal[133] in a rather forlorn attempt to retain control of all the invasion Land forces, something that would not happen and ultimately became a dent to British prestige.

So what – for ALI?

Throughout the remainder of the campaign the increasingly cool personal relationships between Montgomery and the airmen had a strong impact on its overall conduct.[134] Despite this, relations at the operational level between the two Services were good and worked well to the extent that the soldier on the ground did not notice anything was wrong. An Army report in late 1944 stated: 'the difficulties are usually greatest at the higher levels and decrease at the lower end of the scale. At the first point where practical executive

Broadhurst and Dempsey.

action has to be taken, the difficulties begin to disappear, and from there downwards, in nine cases out of ten, there is no problem.'[135] The Army still had several grievances about the RAF's commitment to and involvement in air support. The main one was that the aircraft that had been developed for use in 1943-45 were fighter-bombers, not dedicated ground attack, which meant that they lacked the necessary range. This could have been resolved if the army had captured the airfield country in Normandy, something that the RAF was only too aware of and angry that the Army had failed to do. Equally, the RAF felt that the Army still wanted the air force to do its job for it. This frustration came to the fore during the rapid breakout and advance from Normandy. Tedder told Eisenhower that the air force would do all it could to support the army, but he insisted that 'Air could not, and must not, be turned on thus glibly and vaguely in support of the Army, which would never move unless prepared to fight its way with its own weapons.'[136]

It soon became apparent that without the air force, Montgomery's armies would not break out of Normandy.[137] The key to making air power work in support of the Army was Broadhurst. Broadhurst felt that Coningham's anti-Montgomery vehemence adversely affected air operations and that too much emphasis was placed on the capture of ground for airfields, regarding it as nice to have, but that 'I never felt myself short of any airplanes; we could call on enormous reinforcements if we wanted them.'[138] In Normandy, co-ordination between Broadhurst and Dempsey was extremely effective and remained that way for the rest of the campaign.[139] The Germans viewed Allied tactical air power as particularly effective, instilling terror in them. Despite this, Brigadier Richardson, noted that the lack of Mediterranean experienced staff officers along with the 'unhelpful

influence' of Coningham meant that Tactical Air Support 'co-operation was ineffective.'[140]

Conclusion

There is no question that there was indeed a breakdown in relations between Montgomery on one side and Tedder and Coningham on the other. Montgomery seems to have had poor relations with every other senior Allied Commander in the war, but it was his split with the airmen that was arguably the most infamous. This split was undoubtedly shaped and influenced by their personalities and egos. Montgomery and Coningham had similar egos but different personalities; both craved fame, public recognition and adoration and when denied this sulked. Coningham's flamboyant personality and Montgomery's puritanical nature meant that no matter how much recognition they received, it was highly likely that a split was always going to happen.

The split between Tedder and Montgomery is more surprising and less to do with ego and personality and more with professional ability. Tedder did not think that Montgomery was up to the job of being an aggressive, attacking commander who could beat the Germans. He was bored with the Army moaning about air support, when they were clearly incapable of performing their own role. However, Tedder could be accused of losing sight of the national perspective and failed to see the consequences of sacking Montgomery in Normandy. The context of the time is also important to understanding the deteriorating personal relationships. The British Army had a terrible war until victory at El Alamein, whilst the other two Services had all had great successes; therefore, the opportunity to celebrate the Army's success was never going to be missed by Churchill or the British press. This was necessary for several reasons, the British had to demonstrate that the Army could beat the Germans; Churchill wanted to remain in power and the Army needed to have its morale raised, something that Tedder had identified in July 1942. The uncontrolled nature of this recognition had ramifications for the rest of the war and beyond. The 'establishment' was at fault for singling Montgomery out for gratuitous attention, and failing to control the monster they had created.

So, what impact did ego, poor relationships and personality

actually have on the delivery of ALI in the Western Desert and Normandy? In the Western Desert, it is obvious that personal relationships were vital for the effective delivery of ALI. This is because of the level that the three men were at and the autonomy they had to prosecute the war in the Western Desert in the way they thought best. These personal relationships were heavily influenced by each individual's ego and personality. Fortunately, after El Alamein there was never another major battle where just these three came together to plan and execute it, so the full impact of their deteriorating personal relationships on the delivery of ALI was never exposed. The scale of subsequent operations helped to cushion the impact of the poor personal relationships between the three men.

Once in Europe, the impact of the egos, personalities and poor personal relationships between the three men on ALI was lessened. Whilst their personal relationships grew steadily worse, there were sufficient men below them who were the practical applicators of ALI who had good personal relationships to make it work, although their roles were made more difficult by the animosity between their superiors. The scale of the invasion, the levels of command that the three men were now working at, combined with the fact that there were Commanders above them meant that the impact of their poor personal relationships would be felt at the strategic level with the potential to have more far reaching consequences than just on ALI. Montgomery's ability to annoy the Americans certainly acted against the image of the British Army post World War II.[141]

Notes:
LHA – Liddle Hart Archives, Kings College, London
CCA – Churchill College Archives, Cambridge

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[31] Bungay, *Alamein*, p219.
[32] Brooks, *Montgomery and the Eighth Army*, pp23-4.
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COMMAND AND STAFF TRAINING FOR JUNIOR OFFICERS IN DAYS OF YORE

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The Society's March 2016 seminar dealt, *inter alia*, with the current provision of Command and Staff Training (CST) prior to the eight-week Intermediate Command and Staff Course (ICSC) which is attended by squadron leaders during their first year in rank. These arrangements, all of which are supervised by the RAF Division of the Joint Services Command and Staff College (JSCSC) at Shrivenham comprise, in brief: a one-week residential course at the JSCSC two years after Initial Officer Training (IOT) at Cranwell; two-weeks at the end of a second tour of productive service and a further week at the end of a third tour. These interventions are connected by a rolling programme of peer networking and distance learning, all of which serves to provide the individual with an insight into the functions of other branches and specialisations. In contrast to this, during the discussion period, Air Cdre Byford offered the following observation:[1]

> '[I]f I look back at my own experience, I did IOT, as a graduate – and that was it. The next 'staff intervention' I had was […] as a squadron leader. So, for the first ten, or more, years of my career I just lived in, and flew from, my HAS site on the far side of the airfield. I very rarely set foot on the other side of the station – I had little idea of what anyone else on the station was doing […]'

Why was there such a vacuum? Why was development training for junior officers so low-profile at that time – essentially, the 1980s? In short, because it no longer required them to pass promotion examinations. Those exams were undoubtedly a pain, but they did oblige people to familiarise themselves with some key documents, and, since they were not compulsory, they also provided some indication of an individual's degree of ambition and commitment. What follows is a brief history. That said, the frequency, content and length of the examinations themselves were subject to periodic revision and refinement while candidacy could be limited by amendments related to age and/or time served in rank and further constrained by the vagaries of terms and conditions of service which

were also constantly changing. As a result what follows can only be an overview in general terms – more in the nature of a series of snapshots rather than a coherent movie.

1920-1939

In the early 1920s the rungs of the promotion ladder for the lower, indeed all, commissioned ranks of the RAF were already filled by bemedaled veterans of WW I. They were soon to be supplemented by a post-war intake of prospective career officers, the first of whom graduated from the new RAF College at Cranwell in December 1921 and within a few years these newcomers would expect to be promoted. In the meantime, the ranks of the veterans had begun to thin, creating vacancies to be filled at flight lieutenant and squadron leader level – but by whom? Initially, promotion was by time served in rank and selection, but in 1926 an additional hurdle was introduced in the form of promotion examinations.

The arrangements had been announced in 1925 and covered: Promotion Examination A, from pilot officer to flying officer; the 'B' to flight lieutenant and the 'C' to squadron leader.[2]

Examination A was not too demanding in that it comprised oral and practical tests designed to establish that the candidate was adequately aware of the basic regulations that routinely governed his daily activities, ie some sections of the Flying Training Manual and those (specified) paragraphs within King's Regulations and Air Council Instructions (KRs&ACIs) concerned with flying regulations and certain aspects of administration and discipline. He also needed to demonstrate that he was competent to deal with the running and rectification of engines, signalling (Morse at 8 wpm), drill and able to interpret graphs, rigging diagrams, drawings of modifications and the like.

For the 'B' the syllabus was more academic and the examination process far more rigorous, involving seven written papers, each of three hours' duration. Two covered flying with a further paper devoted to each of: aircraft; aero-engines; signals; organisation and administration; and Air Force law. For both the 'Admin and Org' and law papers candidates had access to KRs&ACIs and, for the latter, the Manual of Air Force Law (MAFL). The responses to the aircraft and aero-engines papers were to be related, in each case, to a specific type

nominated by the candidate.

Examination C broadened the field with seven more three-hour papers covering: one each on aircraft and engines, again related to a specific type and delving deeper than the 'B'; two papers on air operations; one on the organisation of the Navy and Army; one on imperial geography; and one on hygiene and sanitation.

When they were first introduced, promotion examinations were confined to the General Duties (GD) Branch, ie exclusively pilots, but in 1928 it was announced that similar arrangements were also to be introduced for officers of the Stores Branch. Promotion to flying officer would continue to be on a time-served basis (which presumably accounts for the absence of a 'D' examination to equate to the 'A' required by the GD Branch) but from April 1931 onwards, stores officers would be required to pass the 'E' before advancing to flight lieutenant and the 'F' to squadron leader.[3]

Recently commissioned pilots preparing for Examination A were assisted by HQ Air Defence of Great Britain's Individual Training Scheme. This took the form of duplicated Standard Notes which amplified the syllabus and provided all of the references. These notes appeared in two editions, optimised for fighter and bomber squadrons. Inevitably, with the passage of time, there was a tendency for the content to grow.[4] That said, while these notes will undoubtedly have provided a useful pre-examination crammer, by 1930 the RAF had published a formally printed 'bible' that covered the syllabus in some depth.[5]

The system incorporated one significant concession in that flight lieutenants who had already demonstrated that they were eligible for selection to attend the RAF Staff College at Andover were exempt the 'C'. The members of the first (1922) and second (1923) Staff College courses had simply been hand-picked, but officers hoping to attend the 1924 and subsequent courses were obliged first to demonstrate their suitability by passing a Qualifying Examination. When its introduction was first announced, in November 1922, it was accompanied by a pre-exam 'must read' list of seven books and five RAF manuals, plus more than twenty other recommended titles.[6] These would prepare a candidate to sit three-hour papers on six topics which, after some early refinement, came to be known as:

IA. The principles of strategy and their application to problems confronting the British Empire.
IB. The principles of strategy and their application to air warfare.
IIA. War organisation and major tactics of the Navy and the functions of the Air Force in association with the Navy.
IIB. War organisation and major tactics of the Army and the functions of the Air Force in association with the Army.
III. Organisation, administration and development of the Royal Air Force.
IV. History and geography.

Thereafter, the nature of the Staff College Qualifying Examination changed little during the inter-war years and the same was true of the promotion exams. The kaleidoscope of regulations was given a shake from time to time, eg in 1934, specialist officers appointed to a commission from warrant rank under a new scheme introduced the previous year, were exempted the 'B' or 'E' as appropriate, but broadly-speaking, the system adopted a standard pattern. The 'A' retained its original oral and practical format while the topics addressed by the written exams are summarised in Table 1, which reflects specifically 1934; but it differed little from year to year.[7] All papers were of three hours' duration except for 'C' VI and VII and 'F' IV which had been cut to 1½ hours. Candidates sitting papers involving administration and/or organisation were permitted access to KR&ACIs and, for 'C' IV, the MAFL while those taking subjects I and II of the 'E' and 'F' exams were able to refer to RAF Stores Regulations (AP830).

By 1936 the expansion of the air force brought another change in the rules when it became necessary to reduce the minimum time spent as a GD flying officer before promotion to flight lieutenant from four years to three, although the 'B' was still required.[8] Only a year later, however, in order to satisfy the burgeoning demand for Flight Commanders, pragmatism began to trump policy and it became necessary to grant acting flight lieutenancies to officers with as little as one year's service as a flying officer, few, if any, of whom would have even considered attempting the 'B' at that stage.[9] In 1938, to fill all of the additional squadron leader posts that were being created, flight lieutenants began to be promoted on merit, specifically without

GD Branch 'B'	Stores Branch 'E'
I Flying and Airmanship	I Store-keeping and Stores Administration
II Operations 'A' – theory of flight, rules of the air, air pilotage, etc	II Stores Accounting
III Operations 'B' – Naval and Army co-op, photography, signals.	III Organisation and Administration
IV Airframes	IV Aircraft, Engines and Mechanical Transport
V Aero-engines	
VI Organisation and discipline	
VII Administration	

GD Branch 'C'	Stores Branch 'F'
I Air operations (Land)	I Store-keeping and Stores Administration
II Air operations (Sea)	II Stores Accounting
III Administration	III Organisation and Administration
IV Law	IV Hygiene and sanitation
V Imperial Geography	V Imperial Geography
VI Hygiene and sanitation	
VII Organisation	

Table 1. Promotion Exams in the 1930s.

having passed the 'C'.[10] With the last Staff College entrance examination having already been run in 1938, on 6 September 1939, just three days after war had been declared, all promotion examinations were suspended for the duration.[11]

WW II

During the early years of WW II the air force was able to rely on its pre-war stock of junior officers to fill executive appointments at unit level but as their numbers decreased, through operational wastage and/or rapid promotion, their places were taken by RAFVR recruits. With the passage of time, it began to become apparent that unlike their predecessors, because they had not spent several years marinating as

pilot officers and flying officers, permitting them to soak up air force procedure via a process of osmosis, the administrative competence of the wartime intake was beginning to leave something to be desired.

While this trend was not confined to the GD Branch, because of its numerical dominance that is where deficiencies tended to manifest themselves. For newly commissioned officers of the ground branches, including those drawn from the ranks, crash courses in 'officership' were provided at, for instance, Uxbridge and Cosford, but these were not appropriate for aircrew. The problem where aircrew were concerned was that they underwent their professional training as airmen, which meant that their initial instruction was limited to a 'survival kit' amounting to a sensible haircut and sufficient awareness of Service routine and Air Force Law, to give them a better than even chance of keeping out of trouble. Only on gaining their flying badges, mostly in Canada or South Africa, did some of them become instant officers. They were promptly shipped home, to be converted to an operational type and committed to operations. By 1942 it was becoming increasingly apparent that something needed to be done to bridge the gap between aircraftman and pilot officer.

The answer was the Air Crew Officers School (ACOS) which opened at Sidmouth on 1 April 1943; its first course assembled on the 10th. The school provided four weeks of general duties instruction for up to 1,500 students at a time, primarily newly commissioned EATS graduates. It was intended that they would attend shortly after arriving back in the UK, while holding for an indefinite period at a Personnel Reception Centre (PRC) pending assignment to an acclimatisation course at an Advanced Flying Unit (AFU). But attendance at the ACOS was neither essential nor exclusive; some EATS graduates by-passed (avoided?) the course completely while some NCO aircrew, already on active service, were able to attend on commissioning having become officers overnight. In April 1944 the ACOS moved to Hereford (Credenhill) where it remained until after the end of the war.[12]

While the ACOS set out to compress a quart of, what we now call IOT, into a pint pot, a more focused attempt to provide CST (or, to use the contemporary term, GST – General Service Training) was introduced at much the same time via the Junior Commanders Course which would provide:

> 'training in leadership and administration for junior officers who are considered to be suitable for employment as commanders of Flights and Squadrons.'[13]

Established in August 1943 and located, a trifle remotely, at Dallachy, where it was parented by Banff, the three-week course was initially established to handle intakes of 50 students, rising later to as many as 100, at fortnightly intervals. In the event, only eleven courses had been completed by February 1944 when the course was transferred to Cranwell. There it was absorbed by the newly established Officers Advanced Training School (OATS).[14] Still aimed at potential Flight and Squadron Commanders and of three weeks' duration, No 12 Junior Course began on 22 March 1944. Up to 200 students at time could now be in residence and the syllabus covered such topics as:[15]

> Station and squadron organisation and basic administration at that level.
> Man-management; disciplinary powers.
> Air Force Law; arrest and custody.
> Courts of inquiry; summaries of evidence.
> Orderly Room procedures and functions.
> Principles of planned flying and maintenance.
> Medical and physical fitness.
> Station defence.
> Messing, including under field conditions.
> Accounts – pay; equipment procedures; imprests.
> Training and education – career management; courses.
> Service writing; reports.
> Flight Safety.

For potential Station Commanders, the OATS also introduced a four-week course for up to fifteen officers at a time, No 1 Senior Course commencing on 19 April 1944. Apart from the school moving to Digby in July 1945, the ACOS and OATS set the pattern for the remainder of the war.

1945-1947

As in the early 1920s, the post-WW II air force was initially well-provided with junior officers with a sound record of service, albeit

under wartime conditions. It did not follow, however, that the ideal wartime officer would be an equally satisfactory performer in peacetime and the RAF set about creating (what it thought would be) an ideal structure for a permanent post-war air force. Wartime experience had confirmed, what had already begun to be accepted by the later 1930s, that the Trenchardian concept of an air force run by all-singing, all-dancing GD officers was no longer viable – if it ever really had been. As a result, a number of additional specialist ground branches had been created during the war and it was accepted that many of these would have to be retained.

Nevertheless, it was taken for granted that the overall direction of the RAF would still be vested in the GD Branch and in 1946, the RAF College at Cranwell was re-established to produce the next generation of career officers who would be awarded permanent commissions. A year later equipment and secretarial officers were admitted to the College, albeit accommodated, until 1953, in a detached wing at Digby, and the RAF Technical College was opened at Henlow to provide career officers for the Technical Branch. It was anticipated that the output from Cranwell and Henlow (supplemented by a relatively small intake of university graduates and a few serving officers who would be awarded permanent commissions on merit via an annual competition) would eventually fill practically all of the significant command and administrative appointments in the Service.

Broadly speaking, that element of the blueprint for the early peacetime air force – the career officer structure – ran according to plan, but another was an abject failure. It had been anticipated that, beyond the handful of pilots to be trained at Cranwell, practically all other flying personnel, of all trades, including most pilots, would be enlisted as 'aircrew' who were to have sub-NCO status, with their own rank titles, and be accommodated in segregated messes. This ill-conceived scheme was implemented in 1946, and it soon became apparent that its unpopularity was such that it would be unsustainable in the long-term. As early as 1947 it became necessary to reintroduce limited short service commissions in an attempt to maintain recruiting, and in 1950 the 'aircrew' scheme was abandoned; all serving non-commissioned flying personnel were remustered with the minimum rank of sergeant and a 100% commissioning policy was introduced for subsequent intakes of direct entrant pilots and navigators.[16]

Branch	Gp Capt
General Duties	261
Technical (Armament)	17
Technical (Engineers)	52
Technical (Signals)	31
Equipment	34
Secretarial	41
Aircraft Control	-

Table 2. Comparative strengths by branch at group captain level as at July 1949

It would, of course, be the mid-1960s before the 'fast runners' among the early post-war cohorts of Cranwellians and Henlovian would begin to achieve a significant degree of prominence. In the meantime, the RAF would be run by pre-war and wartime veterans, but always numerically dominated by the GD Branch, which meant that most squadron leaders and above were, or had been, aircrew. Some idea of the extent to which they dominated the officer corps can be gleaned from Table 2. Note that, in mid-1949, the 261 group captains in the GD Branch, exclusively pilots, outnumbered the total of 175 fielded by all of the other branches put together. The comparison was less marked at wing commander level but even there 48% were GD and of the others, the seven who were aircraft controllers were all ex-GD (as was practically the entire branch). Furthermore, increasing numbers of maturing middle-ranked GD officers had begun to colonise the Secretarial Branch and by the 1950s it was commonplace for an OC Admin Wg to be sporting a flying badge, either because he had switched branches or because he was a GD officer having his horizons broadened via a ground appointment. The influence of pilots was even more apparent at air rank. For instance, all twelve of the air vice-marshals listed in the Technical Branch in 1949 wore a flying badge, indeed five of them wore the ribbons of decorations won as aircrew; similarly, ten of the thirty-two technical air commodores, had been awarded an MC, DFC or AFC and few of the others will have lacked a flying badge.

1948-1960s

While the RAF was spending four years trying to make its non-commissioned aircrew experiment in social engineering work, this did not obviate the need to manage the, somewhat reduced, officer corps. That meant, inevitably, that promotion examinations had to be re-introduced and they were, but only as the 'A', 'B' and 'C', which were to be common to all branches. The topics to be examined are

Promex A	**Promex B**	**Promex C & Staff College Qualifying Exam**
Admin & Org	Admin & Org	Admin & Org and Air Force law
Air Force law	Air Force law	Imperial geography and current affairs
General Service Knowledge	General Service Knowledge	Principles of strategy and employment of air power
One Branch-related (oral & practical) exam	Two Branch-related papers	Organisation of the Royal Navy and of the British Army
		Two Branch-related papers

Table 3. Promotion Exams in 1948-49.

listed at Table 3 and, while there were fewer papers than there had been before the war, some were also of reduced length requiring only one or two hours, compared to the (almost) universal pre-war three.[17]

The 'B' and 'C' were re-instated for the GD, Technical, Equipment and Secretarial Branches and the RAF Regiment in September 1948 followed by the first examinations for the Marine, Provost, Aircraft Control, Catering and Physical Fitness Branches in March 1949. At much the same time the women's branch of the Service was being reconstituted on a permanent, as distinct from auxiliary, basis. As a result, on 1 February 1949 the WAAF had become the WRAF and, beginning in March 1950, its members were also required to sit the promotion exams.

While the restoration of the examination system had included provision for the 'A', from pilot officer to flying officer, its introduction was initially deferred and, in the event it was never actually implemented, hence the entry in Table 3 being presented in italics. This may have been because it was possible for some officers to be commissioned in the immediate rank of flying officer and accelerated promotion was certainly a factor which would contribute to the ultimate demise of the whole promotion examination system.

When the 'C' was first re-introduced in 1948 it doubled as the Staff College Qualifying Exam. Everyone sat all six papers. Those of candidates seeking to be accepted for Staff College were marked on a competitive basis; the rest, while also marked, were graded on what

Promex B	Promex C & Staff College Qualifying Exam
B-1 Admin & Org	C-1 Admin & Org
B-2 Air Force law	C-2 Air Force law
B-3 General Service Knowledge	C-3 Imperial geography and current affairs
B-? Two Branch-related papers	C-4 Principles of strategy and employment of air power
	C-5 Organisation and role of the Royal Navy and of the British Army
	C-? Two Branch-related papers

Table 4. Exams in 1949-50.

amounted to a pass/fail basis.

It is interesting to note that the syllabus content creep noted in the 1930s continued after the war. The list of references and required reading published in 1948 ran to 36 pages, albeit of very small print.[18] But it did not stop there and that Order was eventually superseded by a formally printed document and by the time that its second edition appeared in 1954, it ran to over 100 pages, of equally small print.[19]

In 1949, what would become very familiar, short-hand designations for the various exams, B-1, B-2, etc, were introduced and the previously joint Admin & Org and Air Force law paper for the 'C' was separated into two – see Table 4.

In 1951 the 'C' was reduced to just four papers and the Staff College Qualifying Exam – the 'Q' – became a stand-alone affair. Compared to the six pre-war papers, there were now only three, Q-2 and Q-3, which had previously been the C-4 and C-5, with the slightly refocused C-3 becoming Q-1– see Table 5.[20] Thereafter, while there was a steady flow of AMOs, and later DCIs, making minor adjustments to both the 'C' and 'Q' with respect to eligibility, including constraints related to age and seniority, and exemptions, there was only one more substantial change; in 1960 the traditional Q-3 was replaced by an exercise in précis writing.

Meanwhile, some post-war provision had been made for formal GST/CST, albeit with limited capacity and generally confined to officers serving on permanent (as distinct from the 'also rans' serving on a variety of, for instance, extended, short service, direct or branch) commissions. This amounted to sustaining the pattern established by

Promex B	Promex C	The 'Q'
B-1 Admin & Org	C-1 Admin & Org	Q-1 Current and British international affairs
B-2 Air Force law	C-2 Air Force law	Q-2 Principles of strategy and employment of air power
B-3 General Service Knowledge	C-? Two Branch-related papers	Q-3 Organisation and role of the Royal Navy and of the British Army
B-? Two Branch-related papers		

Table 5. Exams 1951-66.

the wartime OATS. The school had moved from Digby to Bircham Newton in October 1948 where the first intakes were No 38 Senior and No 46 Junior Courses, both of which were by now of eight weeks' duration, with 12 and 37 students respectively, but later intakes tended to be almost twice those sizes.[21] The last dedicated senior course, No 45, dispersed in August 1950 although diminishing numbers of senior officers continued to participate until 1953 by which time intakes were running at about 75 on each of six annual courses.

On 1 September 1959, the OATS was restyled the Junior Command and Staff School (JC&SS). It is significant that successful completion of the, still eight-week, course would now 'normally be regarded as a prerequisite for selection' for Staff College, whereas the aim of the OATS had merely been to provide a 'post-graduate administrative course', although attendance had always been on a somewhat selective basis. This was clearly illustrated a month later when the school celebrated the completion of No 100 Course, noting that 8,002 students, more than 90% of them junior officers, had completed the course(s) since 1943.[22] That had been a relatively small proportion of the tens of thousands of junior officers who would have worn uniform during those sixteen years, of course, and the numbers clearly reflected the two-tier structure of the contemporary officer corps.[23] Not unreasonably, the air force was disinclined to devote too much effort to developing the staff skills of officers who had limited promotion prospects so, like a number of other courses, attendance at the JC&SS was 'primarily for officers of all branches holding full

career commissions', although there was some latitude in that any slots that could not be filled by the chosen could be made available to lesser mortals.[24]

Apart from the JC&SS relocating to Tern Hill in December 1962, the next significant changes in CST occurred in 1966 when Examination B-3 became Military Studies and C-1 and C-2 were both dropped, leaving just the two branch-oriented professional papers within the 'C', which meant that it no longer made a significant contribution in the context of CST.

1960s-70s

But by this time societal changes had begun to disturb what had become the established pattern. A decline in interest in a military career during the 1950s, culminating in the termination of National Service in 1961, and the beginnings of an increase in the availability of places at universities meant that potential officers were now planning to spend three years studying for a degree rather than joining the RAF straight from school. As a result, it was becoming more difficult to attract the desired calibre of candidates in sufficient numbers to sustain the Cranwell concept – the proportion of cadets entering Cranwell from Headmasters Conference schools plummeted from 63·8% in 1958 (much the same as it had been before the war) to a mere 21% in 1962.[25]

Selected university graduates had been receiving preferential treatment, including long term engagements and antedates of seniority, for some time of course, but the scale of this practice had not been large enough to attract significant comment.[26] From the mid-1960s, however, the numbers involved increased markedly and, because cloistered RAF-sponsored university students were not generally visible to the serving rank and file, and graduates were granted significant antedates of seniority, when they did eventually materialise in uniform they appeared to do so as 'instant' flight lieutenants. The granting of these (so-called) 'Green Shield Stamp'[27] commissions created some resentment among non-university entrants who could expect to serve for almost six years (which, for GD officers would have included a full flying tour) before attaining the rank of flight lieutenant.

While hardly ideal, this development appeared to be unavoidable if

recruiting of people with enough of 'the right stuff' was to be sustained and in 1964 the Air Force Board Standing Committee expressed the view that the long term aim should be to make possession of a degree the basic qualification for a General List commission in the four main executive branches (General Duties, Engineer, Secretarial and Equipment).[28] This idea soon gained traction and within a few years the MoD was exploring the possibility of administering the award of degrees itself but in July 1968 this ambitious project had to be abandoned (or, at least, postponed for a generation). As the Secretary of State for Defence, Denis Healey, put it: [29]

> 'We still intend that all the Service colleges should be federated into a single Royal Defence Academy, which will exercise a central academic and administrative control. But we have concluded that the cost of setting up a Royal Defence College, as a single establishment at Shrivenham to educate regular officers of the non-technical arms up to degree standard, cannot be justified in the present economic climate.'

This did not prevent the individual Services from pursuing the idea, however, and only two months later AMP, Air Mshl Sir Andrew Humphrey, presented the Air Force Board with a firm proposal.[30] This was subsequently implemented as the Graduate Entry Scheme. In practical terms this meant that the RAF soon began to send an increasing proportion of its officer intake directly to university or, in some cases, via an initial year at Cranwell. As a result, the RAF College's last entry (the 101st) to feature traditional-style cadets began its 2½-year course in September 1970; the next intake comprised only university graduates who were required to stay at Cranwell for only eleven weeks.

While the factors leading to the changes at Cranwell, and to the consequent degree of influence that it wielded, had provided a focus for concern, they had been just one aspect of a far more extensive restructuring of the entire officer corps which had been recommended by a 1969 Report compiled by AVM W D Hodgkinson.[31] One of its many conclusions had been that the old-style Cranwell cadetship and the recently-introduced graduate entry scheme were both fundamentally flawed in that they involved the provision of preferential

treatment for people who, while they may have been perceived to have potential, were, as yet, actually unknown quantities, at the expense of officers who, while less academically qualified, had actually demonstrated their abilities in service. The upshot was that, in 1970, the privileged General, and the less well-favoured Supplementary, Lists were merged to create a meritocratic Single List.[32]

By this time, because they held degrees, significant numbers of officers were now becoming flight lieutenants while still under training which meant that they effectively by-passed Examination 'B', so its days were numbered. In 1972 AMP presented the Air Force Board with proposals for a major revision of CST which included an improved standard of initial training that was about to be introduced. It was considered that this would be sufficiently comprehensive to render the 'B' superfluous and it promptly followed the 'A' into limbo.[33] Meanwhile, the introduction of the equal-opportunities-for-all Single List meant that the previously selective provision of CST had to be made more widely accessible and it was expected that the throughput at the JC&SS, which had been running at some 350 students per year, might more than double to as many as 750.[34]

Meanwhile, there had been a major change in the method of selection of students for attendance at Staff College. Since 1 February 1966, when the first course had begun, prospective students were now being prepared and assessed via a two-year correspondence package overseen by the newly-established and bespoke Individual Studies School (ISS) at Bracknell.[35] This had rendered the traditional 'Q' redundant, but the change in the qualification and selection process had involved the imposition of revised age constraints which excluded a three-year cohort of officers who had yet to qualify for Staff College under the old rules and who were now too old to apply for the new ISS Course. Specifically to cater for this dwindling group, a rump 'Q' was sustained until 1968.[36]

When the 'B' had been cancelled in 1972, it had been replaced by a four-week residential course, the Officers Command Course (OCC), the first of which assembled in March 1973 at Tern Hill, where the JC&SS had morphed into the Officers Command School (OCS). This innovation was accompanied by, from April 1973, a reduction in the length of the ISS correspondence course from two years to eighteen months. The final stage in the new pattern of pre-Staff College CST

was the introduction of a one-month residential course, the Basic Staff Course (BSC) which was to be attended by recently promoted squadron leaders; the first of these assembled at Bracknell in January 1974.

When it had been conceived in 1972, it had been anticipated that the majority of junior officers would attend the OCC, hence the forecast annual intake of up to 750. In the event, however, the throughput on the nine annual courses never came anywhere near that number. Typical intakes in the mid-1970s were still running at about 65 per course but the school moved to Henlow in June 1976 and, perhaps because of the numbers which were now enrolling on the ISS Course, attendance fell off markedly. By the end of the decade, courses were running at about half their earlier strength and some were much smaller, eg No 57 OCC in June-July 1979 had only twelve members.

As noted above, while the legacy two-paper 'C' examination had been contributing little, if anything, to CST since 1966, it had continued to be run, albeit eventually reducing to just one specialist paper for most branches, until as late as 1982 when it too went the way of the 'B' and the 'Q'.[37] This was not without a ripple of controversy, however, as instances soon began to occur of flight lieutenants who had not taken the 'C' being promoted over the heads of folk who had, which was perceived by some to be a further late manifestation of the (apparently) something-for-nothing 'Green Shield Stamp' syndrome.

Which brings us to Air Cdre Byford's 1980s when, unless, one was 'volunteered' to spend a month at the OCS, or applied to embark on the self-inflicted ISS course, one was pretty much left to one's own devices. For some 50 years the promotion exams and, to a lesser extent, the 'Q' had provided the core of CST for junior officers and, since all but the most terminally unambitious of them aspired to become at least flight lieutenants, most folk were more or less obliged to sit the 'B' and that served to provide at least some insight into how the rest of the air force worked.

Notes:
AMO = Air Ministry Order; AMWO = Air Ministry Weekly Order; AP = Air Publication; DCI = Defence Council Instruction; SD155 = Secret Document 155

(Organisation Memoranda); TNA = The National Archives

NB. While specific AMOs, AMWOs and/or DCIs have been cited below, readers should be aware that they were often subject to subsequent amendment and periodically republished in slightly revised editions, sometimes annually. Thus, while the examples below will serve to provide information on a particular examination, or an indication of the aim, content, duration and location of a course, there may be differences of detail in earlier or later edicts.

[1] *RAF Historical Society Journal*, No 65, p108.

[2] AMWO 181 of 19 March 1925 announced the introduction of promotion examinations and provided details of the syllabus for each one along with the specific references with which a candidate need to be familiar.

[3] AMWO 429 of 21 June 1928.

[4] Three examples have been preserved at TNA. AIR 5/882 is a copy of the 69-page, 1927 bomber edition of the Standard Notes; AIR5/1936 is the 1931 bomber edition; and AIR20/63 is the fighter edition of 1935, by which time it had grown to 80 pages.

[5] AP 1388, 'RAF Standard Note Book for "Ab Initio" Flying Training Schools' the first edition of which was issued in March 1930.

[6] AMWO 846 of 16 November 1922.

[7] AMO A.118 of 17 May 1934.

[8] AMO A.88 of 18 April 1936.

[9] AMO A.182 of 8 June 1937.

[10] AMO A.441 of 1 December 1938.

[11] AMO A.353 of 6 September 1939.

[12] SD155 No 83/45 of 11 January 1945 noted the formation of No 2 ACOS at Almaza in November 1944 prior to its moving to Gaza, and No 3 ACOS at Portici (Naples) in December before moving to Sulmona. By default, the unit in the UK had become No 1 ACOS in November 1944; having first been redesignated No 1 Officers School, it disbanded, still at Hereford, in January 1947.

[13] SD155 No 943/43 of 11 August 1943 which authorised the provision of the Junior Commanders Course.

[14] The unit at Cranwell became No 1 OATS in November 1944, to distinguish it from No 2 OATS which had just opened at Kalafrana before moving to Amman in 1946. In 1945 they were joined by No 3 OATS at Poona, later Barrackpore. In 1946, following the demise of both overseas units, No 1 OATS dropped its numerical designation.

[15] TNA AIR29/1157. Ground Training Directive No 8/44 issued by the Directorate of Training on 21 February 1944 was concerned with the reorganisation of the Junior Commanders Course within the OATS and provided an outline of the syllabus.

[16] This issue was considered in greater depth in 'Aircrew Status In The 1940s' in the *RAF Historical Society Journal* No 42 (2008).

[17] AMO A.830 of 6 November 1947.

[18] AMO A.823 of 14 October 1948.

[19] AP 3199, 2nd (1954) Edition. 'Regulations and syllabi for officers' promotion examinations and Staff College qualifying examination.'

[20] AMOs N.323 and A.217 of 30 March 1950.
[21] AMO A.748 of 30 November 1950.
[22] TNA AIR28/1456. Air Ministry press release dated 16 October 1959 appended to the F.540 for Bircham Newton.
[23] While it had always existed, the distinction between career officers and the rest had been heavily underlined by the publication of AMO A.362 of 27 November 1957 which announced a change in the presentation of the gradation lists in the Air Force List starting with the January 1958 edition. Officers appointed to permanent commissions with 'full career' prospects would now appear on the General List, of each branch. The Supplementary List, similarly sub-divided by branch, would contain the names of officers serving on commissions with 'limited career' prospects, including National Service officers and sundry other non-permanent terms.
[24] AMO A.228 of 9 September 1959 announced the restyling of the OATS as the JC&SS, stated the aim of the course and the constraints on attendance.
[25] Haslam, E B; *The History of Royal Air Force Cranwell* (HMSO, 1982), p176.
[26] The RAF had offered permanent commissions to selected graduates throughout the inter-war period and had reinstated this practice when permanent commissions had been reintroduced in 1945.
[27] Introduced in 1958, Green Shield Stamps were a sales promotion scheme that permitted retail customers, who had saved sufficient stamps, to acquire items from a catalogue; the modern equivalent would be 'loyalty cards'.
[28] TNA AIR6/147. Air Force Board Standing Committee conclusions 5(64).
[29] HC Cmnd 3701; Supplementary Statement on Defence policy 1968, para 66.
[30] TNA AIR6/172. Air Force Board Memorandum 68(28).
[31] TNA AIR20/12267. AF/HC/BS/12, dated 1 May 1969, the 'Hodgkinson Report' on the officer structure of the RAF.
[32] DCI S60/1970 (RAF) of 8 April announced the introduction of the single list for the GD (Flying) Branch followed by S151/1970 (RAF) of 16 September which did the same for the various ground branches.
[33] TNA AIR6/176. In his Note (72)17 of 19 May 1972, in which AMP, Air Mshl Sir Andrew Humphrey, outlined his proposed reform of CST, he informed Air Force Board colleagues that had unilaterally cancelled the B Promotion Examination with immediate effect.
[34] *Ibid*.
[35] DCI S77/1966 (RAF) of 8 June.
[36] Beginning in the inter-war years, annual reports on Staff College Qualifying Examinations were published as AP 1077; the 1967 edition (TNA AIR10/5595) notes that the exam to be held in 1968 would be the last.
[37] Beginning in the inter-war years, reports on each batch of RAF Promotion Examinations were routinely published as AP 1215, the last of which appeared in 1982.

CHAOS AT COLINDALE
(A Personal Reflection of the Last Days of RAF Hendon)

Wg Cdr Colin Cummings

As one of the earliest airfields in the UK, Hendon has a very significant place in aviation history. Its name is synonymous with that of the pioneer, aviator Claude Grahame-White and it was a pre-WWI centre of flying training and display flying.

Originally no more than a few fields ‘at the end of Colindale Avenue’, during WW I Hendon was to become part of, what might now be called, an aviation ‘hotspot’, with factories producing aircraft both on site and at nearby Cricklewood. The airfield was taken over by the RNAS, although flying training continued to be conducted by commercially-run schools operating under contract, and in 1917 an Aircraft Acceptance Park was established. Beginning in 1920, Hendon hosted the annual RAF Aerial Pageant (RAF Display from 1925) until 1937, supplemented between 1932 and 1935 by the SBAC Display. The land actually belonged to Grahame-White until 1926 when ownership passed to the government and, now as RAF Hendon, it eventually became home to Nos 24, 600, 601and 604 Sqns and the Superintendent of the Reserve.

The appointment of Lord Trenchard as Commissioner of the Metropolitan Police in 1931, led to some land, including the former Hendon Country Club building, being hived off in order to house the Metropolitan Police College (now the Peel Centre) which opened in 1934.

Hendon’s location made it convenient for the Air Ministry, hence the presence of No 24 (Communications) Sqn, and for the Royal Family, notably the Prince of Wales who kept a number of aeroplanes there, and Hendon eventually became home to the King’s Flight between its formation in 1936 and 1939. Throughout WW II Hendon continued to offer an aerial taxi service for the Air Ministry, including facilities for VIPs, provided by Nos 24 and 510 Sqns. This service continued to be provided after the war by No 31 (later the Metropolitan Communications) Sqn. There was also an American presence, providing similar facilities and Nos 601 and 604 Sqns reappeared in 1946, but re-equipment with jets meant that they had to move out in 1949.

By the 1960s, urban development around the airfield and the railway line along one side, made the site increasingly restricted and flying operations ceased in 1967. Aside from the occasional helicopter, the last RAF aeroplane to land at Hendon was a Beverley, destined for the proposed RAF Museum, and which was to languish there before being broken up on-site in 1990.[4]

By 1970, the airfield site had been sold off for development as The Grahame Park Estate and the remaining military presence was confined to a 'half-moon' enclave around the perimeter and even that was bisected by a roundabout granting access to the estate. Two main units occupied the site and generally these were confined to their segments of the 'half-moon'. First, and also providing the station support services, was the Joint Services Air Trooping Centre (JSATC). This unit was responsible mainly for moving personnel between UK and Germany and it had detachments at Luton Airport and in central London to do this, as well as a transit hotel at Hendon.

The second unit was the RAF Supply Control Centre (RAFSCC). This lodger unit, commanded by an air commodore, developed, implemented and maintained what, at the time, was a universal supplies management system which was the envy of many civilian organisations and other military formations (see *Journal 35*).

Inevitably, for so small a station, occupying very valuable real estate, Hendon's long term future ranged from uncertain to non-existent and it was eventually decided to move both units to RAF Stanbridge, a former signals hub near Leighton Buzzard, and work was put in hand to develop that site and close RAF Hendon.

The date for the formal closure was to be 1 April 1987 and it was decided that a suitable event would be held to mark the end of Hendon, which had served the RAF so well for so many years. A small volunteer project team was set up in 1986 to plan something suitable and with my known interest in matters historical, I was appointed to lead it. As I was just starting my third tour at Hendon and had previously been PMC of the Officers Mess, I knew something of

[4] There were at least three more fixed wing movements, the first being a Piper Cherokee which was obliged to land due to adverse weather on 22 December 1968. The following day another Cherokee arrived with a ferry pilot and both aircraft were flown out to Northolt.

the local area, its sensibilities and some of the ‘movers and shakers’ in the community.

It was quickly determined that the most appropriate event would be a ceremonial Beating Retreat at sunset, to be followed by an ‘above average’ cocktail party. A straightforward enterprise one might imagine and so it was – at least to begin with. The current incumbent of the office of P1(Ceremonial) was consulted and a bid made for the Central Band of the RAF. A further bid for a suitable flypast saw an allocation of a large formation of Tornado F2s reserved and the warm relations which existed with the RAF Museum, brought forth an invitation to hold the ceremony at the museum and the party in the Art Gallery of the main building. So far so good.

Christmas 1986 came and went with the team confident that all the important aspects of the event had been identified and addressed – but it was too good to be true!

The New Year brought with it two surprises in such rapid succession that I no longer recall the actual sequence. The station enjoyed an exceptionally good relationship with the local borough council and they moved to award the station the Freedom of the Borough of Barnet. The complication here was that a unit that was about to close really shouldn’t accept such an honour, but the Station Commander, who was exceptionally ‘media savvy’ and whose photograph frequently adorned the pages of the local paper, thought differently and he persuaded the MOD that the honour should be accepted – and returned – the same day!

The second, and totally unexpected development, came right out of left field – St James’ Palace. Her Majesty Queen Elizabeth, The Queen Mother, had been the Honorary Air Commodore of No 600 Sqn and, unbeknown to us, its association had continued to provide Her Majesty with an annual report and it appeared that this had made her aware of Hendon’s imminent closure. In view of the station’s long association with the RAuxAF, and having been alerted by its mafia, she decided that she would like to be present at the event. Thus did the CO receive a telephone call which began with a very formal, ‘Her Majesty bids me greet you’! The caller, who was one of the Queen Mother’s personal staff, then explained various things and concluded with the wonderful, but somewhat naïve phrase, ‘in an entirely informal capacity, of course.’ As the Station Commander and I agreed

– who's ever heard of an 'informal Royal visit?'

The immediate reaction when the conversation was reported up the chain, was to change the entire size and shape of the guest list. HQ Support Command at Brampton had been treating the closure as a low-key affair and had intended to send a one-star for the sake of appearances. Overnight, he was sidelined and replaced by the Commander-in-Chief, his lady and an extensive retinue of hangers on, all of whom had to be factored into the plans. Similarly, the MOD, whence the one-star Director of Movements had been intending to come, unless he could find something a bit more interesting to distract him, was immediately trumped by the four-star Air Member for Supply & Organisation.

As to the Freedom Ceremony itself, the intended group of station airmen who were to have supported the Beating Retreat were suddenly gazumped by the full majesty of The Queen's Colour Sqn (QCS), parading the Queen's Colour of the RAF in the UK and where QCS goes,The Central Band of the RAF is often not far behind.

For my small group of volunteers, an urgent posting to a remote part of the globe, even one where there might be few worldly comforts, suddenly became a very attractive option – but it was already too late to flee!

After a few hastily convened meetings, a new plot began to emerge as a full day and evening of 'interlocking' – I use the term tongue in cheek, bearing in mind what happened – events. First, there would be a Freedom Ceremony, conducted outside the Council Offices, in the form of a large parade complete with band. Immediately following this would be 'an exercise' of the newly granted Freedom, in the form of a march through the borough. A few silly things began to creep in, such as the fact that the march would pass the house of the boxer Henry Cooper, who had fought his last bout back in 1971 but was still something of a local celebrity. To avoid any possible adverse reaction further down the line, it was considered politic that we should forewarn him in advance.

The march would be followed by a civic lunch – but only for the great and good of course. After lunch, the same group of G&G would be taken to the Police College for a tour and then to the Officers Mess for afternoon tea. After allowing the group to freshen up, all would assemble at the RAF Museum to receive Her Majesty and the sunset

ceremony would begin, followed by the cocktail party. As was the custom, The Queen Mother would leave, having witnessed the return of the freedom scroll to the council, and had a few glasses of G&T at the cocktail party, which itself would conclude with the playing of the National Anthem and everybody would then go home!

Hardly was the ink dry on the revised plan when there was another; 'Her Majesty bids me greet you' telephone call. This time it was to advise us that The Queen Mother had another engagement that day and could we just 'tweak' the programme a little? The not unreasonable question as to what 'tweaking' actually meant, elicited the response that could the whole of the evening show move 90 minutes to the right! Well if that is Her Majesty's desire, of course it can, why didn't we think of that first and where did we put the drawing board?

The one area which caused absolutely no issues whatsoever, was the selection of a Parade Commander: step forward one enthusiastic wing commander ex-Cranwell cadet, who not only looked the part with his tall, ramrod stance but his rich Welsh voice was a match for most sergeant majors. He took to the role as a duck to water and immediately began to learn his part. It transpired that his daily commute to work by car, which he shared with another officer, approximately covered the duration of the parade and so at first, the parade orders were read and digested, next they were spoken aloud and finally, and to the irritation and occasional embarrassment of his travelling companion, delivered in a robust parade ground style. On one occasion, the couple were stuck in a traffic jam in a tunnel near Hatfield and car engines were turned off until the blockage cleared. Suddenly and from deep in this queue, a booming voice announced: 'March on the Queen's Colour for the Royal Air Force in the United Kingdom – Present Arms.' After this, subsequent trips to and from work were conducted with the car windows, firmly shut.

As time ran on, rehearsals were ordained and these moved from uniform inspections and basic arms drill to rehearsals for the ceremonies themselves. A few days before the event, QCS arrived in force at RAF Hendon and polishing up the drill was entrusted to their experienced staff. First, the station contingent and QCS faced each other across a hangar and went through the full gamut of static arms drill. The reaction of the station personnel was amazing. They were

Originally the Aerodrome Hotel, this half-timbered faux Tudor building became the RAuxAF Officers Mess between the wars and the post-war Officers Mess.

not going to be shown up by QCS and, to a man, their own personal drill improved to the extent that after a few hours of hard application, the QCS warrant officer declared himself satisfied and moved on to the parade itself.

Part of the ceremony involved an officer being presented with the framed freedom scroll, which was then slow marched across the front of the parade with an armed escort. A female officer was detailed for this task and – at the risk of being non-PC – the lady in question was, how can I put this delicately, 'easy on the eye'. Having practised with her escort, the time came for the scroll to be paraded in the rehearsal. At the end of the march, the officer was in tears: it appears that a number of 'Rocks' had voiced their views; not so much about her marching ability but what they might care to do should they meet said officer elsewhere!

All seemed set fair, although a wet weather version of the event had been planned and rehearsed and there was a thought of some light rain, with the intention of a Go/No Go decision to be taken at 1000 hrs on 1 April. The morning brought forth what might reasonably be called: 'a Michael Fish moment' and at 0700 hrs the rain started – not a few spots, nor a light drizzle but serious water from above! The decision to go with the wet weather version of the morning's Freedom

Ceremony was ‘a no-brainer’.

Fortunately, both programmes used the Officers Mess as the ‘mounting base’ for the Freedom Ceremony so, after coffee and bickies had been served, it was only a short walk from there to the large hangar – the only substantial building remaining in use by then – which, whilst normally the MT garage, had been transformed for the day into a parade ground.

The parade was suitably impressive with The Central Band and The Queens Colour Squadron performing to their usual immaculate standard, and the station personnel rising admirably to the occasion and being justly proud of their contribution. The civic lunch at the Borough Council building was also well received but the weather ensured that the exercise of the newly granted Freedom of the Borough would need to wait for another day. As the station was to close officially at midnight, however, and the freedom scroll was to be returned to the borough, ‘another day’ would never come.

The afternoon programme, led by the Metropolitan Police College interlude, offered the chance to change out of a wet uniform, before returning to the fray with afternoon tea, leading to the sunset ceremony and the eventual cocktail party.

The event started badly with elderly members of the squadron associations arriving at the RAF Museum being directed to the RAF station enclave. Unfortunately, the gate to which they were directed would not be opened until later and hence, irritated, wet and cold, they were compelled to return to the museum entrance and come to the station the long way around. The audience, with a fresh smattering of the great and good, assembled in the same hangar as the morning and to the very second, Her Majesty’s car reversed in to the building, preceded by the inevitable stink of exhaust fumes, and the ceremony of Beating Retreat began, bereft of course of the Tornado flypast but nonetheless impressive, enjoyable and moving in equal measures.

The rain was unabated as we made our way to the RAF Museum, via the linking gate which was now open. The unseemly spectacle of the hosts rushing to get to the museum before The Queen Mother’s limousine in order to be there to greet her again, was achieved by sending Her Majesty’s car the long way around.

The cocktail party was an enjoyable counterpoise to the earlier more formal events and it was immediately clear that The Queen

Mother was in her element. The intended 30-minute stay turned into a full two hours before, at 2100 hrs, she was escorted to her car and everybody could relax and return to the Mess bar to wind down the evening. The rain chose this precise moment to stop and I made a note to have a few words with the station padre about the lack of support from the higher echelons with whom he communicated.

A few details still needed to be tidied up and these took me a little longer than expected. Nonetheless, and despite the need to change into a third uniform (apologies for boasting about an extensive wardrobe!) and not actually having been introduced to Her Majesty, I eventually set off to return to the Mess in anticipation of joining the party, only to find that the damn gate had been locked again, thus extending my trudge.

Ah, I thought, as I walked into the Mess and parked my dripping hat near a suitable radiator – completely forgetting that the heat on RAF stations is always turned off on 1 April – now I can relax with a few glasses of something rather nice. I pushed open the doors to the bar only to discover that the shutters were down and the bar had been ordered closed!

25 April 1945: THE OPERATION TO DESTROY THE FÜHRER'S MOUNTAIN RETREAT

John Boyes

25 April 1945. The final acts of the war in Europe are taking place. The American and the Soviet forces meet each other at Torgau on the River Elbe. For the Australian and New Zealand squadrons of the RAF, ANZAC Day celebrations are underway. With few meaningful targets left to bomb, Bomber Command's operations were being curtailed. But there was to be one final show of force against the crumbling Reich.

On that day, at dawn, bombers from RAF Bomber Command squadrons and US Eighth Air Force units took off from their bases in eastern England. The targets for the 282 American B-24 crews on Mission 968 were the rail marshalling yards at Salzburg (44th BG), Hallein (446th BG) and Bad Reichenhall (392nd BG). They were escorted by 203 P-51s. The RAF's targets were psychologically more significant. Their objectives, in fact not far from the American targets, were the SS Barracks and the *Berghof*, Hitler's residence in the mountainous Obersalzberg enclave where it was thought by some that the Nazi hierarchy were preparing to make their last stand in the 'Alpine Redoubt'. Some sources claim that a third target was also involved. This was the *Kehlsteinhaus* or 'Eagle's Nest', a tea house constructed for, but little used by, Hitler and perched on a rocky outcrop on the Kehlstein Mountain. The crews had been briefed four times over the previous three days but the operation had subsequently been cancelled. On one occasion the crews were stood down just after the engines had been started. Special charts had been issued as the usual plotting charts did not cover the target area. The stations had been guarded after the first operation had been cancelled in case of any security leak. But now the weather over the mountains had cleared.

Three hundred and fifty-nine Lancasters from twenty-five squadrons in Nos 1, 5 and 8(PFF) Groups along with sixteen Pathfinder Force Mosquitos took part in the operation. They were accompanied by a fighter shield: 131 RAF Mustangs equipped with long-range tanks from thirteen Fighter Command squadrons and eighty-eight US Eighth Air Force P-51s. The RAF fighters took off on

RAF SQUADRONS OPERATION TO BERCHTESGADEN/OBERSALZBERG 25 APRIL 1945

SQN	GRP	STATION	TYPE	NUMBER	CODE	TARGET		OTHER	LOCATION	FTR	ABORT	COMMENTS
9	5	BARDNEY	LANCASTER	18	WS	12	Berghof	1	Bridge		5	
12	1	WICKENBY	LANCASTER	16	PH	16	Berghof					
44 RHODESIA	5	SPILSBY	LANCASTER	8	JW	6	Berghof				2	
49	5	SYERSTON	LANCASTER	12	EA	10	SS Barracks				2	
57	5	EAST KIRKBY	LANCASTER	5	DX	4	Berghof				1	
100	1	ELSHAM WOLDS	LANCASTER	16	HW	15	SS Barracks				1	
101	1	LUDFORD MAGNA	LANCASTER	24	SR	23	Berghof				1	
103	1	ELSHAM WOLDS	LANCASTER	16	PM	16	SS Barracks					
150	1	HEMSWELL	LANCASTER	16	IQ	16	Berghof					
153	1	SCAMPTON	LANCASTER	13	P4	12	Berghof				1	
166	1	KIRMINGTON	LANCASTER	25	AS	24	Berghof				1	
170	1	HEMSWELL	LANCASTER	16	TC	16	Berghof					
207	5	SPILSBY	LANCASTER	10	EM	8	Berghof				2	
227	5	STRUBBY	LANCASTER	6	9J	3	Berghof				3	
300 POLISH	1	FALDINGWORTH	LANCASTER	14	BH	14	Berghof					BH-Z (PD383) landed damaged at Juvincourt, Paris
405 RCAF	8 PFF	GRANSDEN LODGE	LANCASTER	9	LQ	9	Berghof					
460 RAAF	1	BINBROOK	LANCASTER	20	AR	19	Berghof			1*		Flak damage. A/c crashed near Hallein. Four KIA
550	1	NORTH KILLINGHOLME	LANCASTER	23	BQ	23	Berghof					
576	1	FISKERTON	LANCASTER	25	UL	25	Berghof					
617	5	WOODHALL SPA	LANCASTER	16	YZ	13	Berghof				3	Cloud over target. Bombed SS Barracks
619	5	STRUBBY	LANCASTER	6	PG	4	SS Barracks			1**	1	Flak damage. A/c crashed near Trauenstein
625	1	SCAMPTON	LANCASTER	11	CF	11	Berghof					
626	1	WICKENBY	LANCASTER	14	UM	14	Berghof					
630	5	EAST KIRKBY	LANCASTER	5	LE	5	Berghof					
635	8 PFF	DOWNHAM MARKET	LANCASTER	15	F2	14	Berghof	1	Prien an Chiemsee			Lancaster F2-E (PB926) bombed Prien
				359		332		2		2	23	
105	8PFF	BOURN	MOSQUITO	8	GB							Two aircraft landed at Brussels
109	8PFF	LITTLE STAUGHTON	MOSQUITO	8	HS							One aircraft landed at Brussels

* AR-M Serial NX585. Aircraft was on its first operation.

** PG-F Serial LM756

FIGHTER COMMAND ESCORT SQUADRONS - RAMROD 1554

118		BENTWATERS	MUSTANG III	12	NK	
122		ANDREWS FIELD	MUSTANG III	9	MT	
126		BENTWATERS	MUSTANG III	11	5J	5J-D and 5J-S RTB early
129		BENTWATERS	MUSTANG III	5	DV	DV-T RTB at 08.15
165		BENTWATERS	MUSTANG III	5	SK	
234		BENTWATERS	MUSTANG IV	10	AZ	Two aircraft RTB at 0750
303 POLISH		ANDREWS FIELD	MUSTANG IV	10	PD	Squadron landed at ALG B-86 (Helmond) after operation to refuel before RTB
306 POLISH		ANDREWS FIELD	MUSTANG III	12	UZ	5 a/c landed on the continent at ALG B-74 (Valenciennes) after the operation to refuel and RTB later in the day
309 POLISH		ANDREWS FIELD	MUSTANG III	11	WC	WC-R RTB at 10.35. Engine trouble. Remainder landed at ALG B-86 (Helmond) after the operation to refuel.
315 POLISH		ANDREWS FIELD	MUSTANG III	12	PK	PK-A landed short of the runway on return owing to lack of fuel
316 POLISH		ANDREWS FIELD	MUSTANG III	10	SZ	
442 RCAF		HUNSDON	MUSTANG IV	12	Y2	Two aircraft diverted to Manston after the operation to refuel
611		HUNSDON	MUSTANG IV	12	FY	

Op RAMROD 1554 at around 0700 hrs and the operational plan was for the fighters to sweep to the north, south and rear of the bombers. The length of the bomber formation, however, made it difficult to provide totally effective cover. No 105 Sqn's Mosquitos were fitted with Oboe to guide the bombers to their targets.

With the Reich's territory now being overrun by the advancing allied forces resulting in correspondingly reduced areas of air defence, passage to the target was now less hazardous until the target area itself was approached. The bombers routed via Andrews Field, Cap Gris Nez and Paris before heading for southern Germany. *Flak* batteries, however, were still present, but scattered and still willing to mount a stiff if somewhat dispersed resistance to the incoming bombers. The American bombers appear to have suffered worse in this context as twenty B-24s were damaged although only one airman was wounded. Australian, Canadian, Polish and South Rhodesian crews flew alongside their British compatriots and the aircraft reached their target between 0930 and 1000 hours.

The Master Bomber marked the target at 0946hrs. Fifty-nine aircraft dropped their bombs on the SS Barracks – target for the second wave of bombers – with the remainder targeting the *Berghof*. The specified load for the Lancasters of the 1 Group contingent, the bulk of the force, was one 4,000 lb HC 'Cookie', four 1,000 lb MC, one 500 lb MC and one 250lb GP bombs. Nos 9 and 617 Sqns, which specialised in precision bombing, carried the last of Barnes Wallis's 12,000lb MC 'Tallboy' bombs to be dropped in the war.

Weather conditions in general were mixed with only a light snow cover over the target although some crews reported 'clear above – five tenths cloud cover over the target.' Other crews reported clear conditions and good target visibility. Unfortunately, problems were experienced with the target marking Mosquitos receiving the Oboe signals in the mountainous area and this, along with the cloud, caused thirty-two Lancasters to abort with most dropping their bombs in the general area of the primary targets. One hit a bridge in Berchtesgaden, the only damage done in the town and a 635 Squadron Lancaster III (F2•E: PB926) suffered a hung load over the target due to an unserviceable distributor. The crew subsequently dropped their bombs on a level-crossing at a railway station in Prien am Chiemsee on their homeward journey.

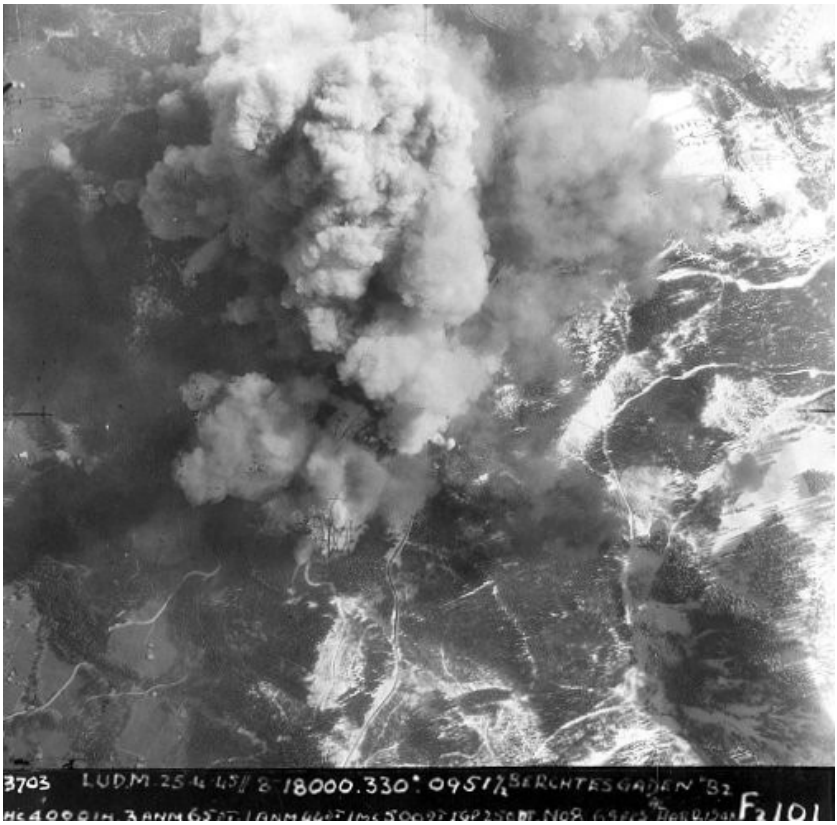
A Lancaster of No 619 Sqn.

Three aircraft did not return. One from No 300 Sqn (BH•Z: PD383) was damaged by *Flak* and the pilot and flight engineer were wounded. The aircraft was homeward bound but such were the injuries that it diverted to the Advanced Landing Ground at A-68 Juvincourt in north-west France. This airfield ironically had been one of the main *Luftwaffe* bases during the occupation of France but after falling into allied hands had been taken over by the USAAF.

The second crew were not so lucky. Lancaster III (PG•F: LM756) from No 619 Sqn was hit by *Flak* and crashed in the mountains near the Austrian village of Adnet. The squadron's unenviable task had been to fly interference raids, circling around the target to attract *Flak*. Four of the Canadian crew including the pilot were killed in the crash, among the last in Bomber Command to die in the war and three crew members parachuted to safety and were taken prisoner.[1] The crew who died are buried in the Klagenfurt War Cemetery in Austria.

A third Lancaster I (AR•M: NX585) from No 460 (RAAF) Sqn was hit by *Flak* blowing away a bomb bay door and disabling the two starboard engines. Five of the crew baled out but the rear gunner's parachute had been shredded by the gunfire so he joined the pilot for the crash landing which happened at Traunstein to the north west of Berchtesgaden.[2] Fortunately both men, along with the other crew members, survived. The Mustangs were flying at the limit of their range and several stopped at Advanced Landing Grounds on their return journey to refuel.

No bombs were dropped on the *Kehlsteinhaus*. This remains the



The Obersalzberg complex from 18,000 ft on 25 April 1945.

subject of speculation. The building would have been very hard to identify in the snowy peaks and very difficult to hit. More likely perhaps is the generic use of the 'Eagle's Nest' name to refer to the *Berghof* as Berchtesgaden was used interchangeably with the Obersalzberg. Some claim that the mountain tea house was never on the target list as the Allies, realising by than that rebuilding post-war Germany would become a priority saw it as the basis of a developing tourist industry in an area where other rebuilding projects would have been difficult.

Although the tonnage of bombs dropped was significant, Hitler's *Berghof* was only damaged, as too were Göring and Bormann's houses. Other properties such as Albert Speer's studio remained intact.

The complex of underground tunnels which connected the main buildings was undamaged. On 4 May, the US Third Infantry Division moved into the area and took over control. The three main properties were demolished in the early 1950s when the area was handed back to the Germans.

Although 25 April was effectively the last day of US Eighth Air Force bombing missions, two days later USAAF P-47 Thunderbolts attacked the Berchtesgaden railway station but made no incursions into the Obersalzberg.

In 2002, a detailed bomb survey of the target area was undertaken prior to the construction of a new luxury hotel on the hill on which once stood *Landhaus Göring*. This revealed a quantity of unexploded ordnance and the revelation of a 'near miss' Tallboy crater some 150 yards from the *Berghof*. Today, little remains of the Nazi era, most of the remains having been systematically removed. The *Kehlsteinhaus* remains intact and this mountain eyrie still attracts thousands of tourists annually.

Perhaps surprisingly, this final act by Bomber Command has remained in relative obscurity over the years. Air Chf Mshl Harris's belief in the war-winning potential of unrestricted bombing was already falling out of favour. In the end the awkward truth was that only ground forces could achieve victory and the spectre of Dresden, however distorted the true facts about this may have been, was beginning to haunt political and public minds. The war was over. It was time to move on. But it was to be sixty-seven years before the bravery of the men of Bomber Command was to be truly recognised.

Notes:

[1] The last Bomber Command casualties of the war occurred on the night of 2/3 May when two Halifaxes (RG375 and RG373) from No 199 Sqn collided over Kiel whilst flying a Mandrel radar jamming screen. It was feared that the Germans were assembling ships to take troops to Norway. During the same night one of the attacking force Mosquito NF XIXs of No 169 Sqn (MM680) was hit by *Flak* and also crashed near Kiel. The crew of Mosquito MM637, also from 169 Squadron, was killed whilst flying a training sortie on 6 May.

[2] Electrical transformers at Traunstein were the target for the 458th BG, so it is possible that the Lancaster was hit by *Flak* batteries protecting the site.

THE RAF AND THE BAGHDAD AIR MAIL, 1921-27 – FORGING THE FIRST LINK IN AN IMPERIAL CHAIN.

Wg Cdr Jeff Jefford

Despite the fact that British authority in the region was not given international endorsement until 1920,[1] British government agencies, including the Air Ministry, began planning for the post-war era on the assumption that much of the Middle East was going to be under British management. As early as September 1918 outline plans were being drafted for the development of post-war aviation, both military and civil, which included the establishment of a network of air links to interconnect the empire. By December these plans had begun to crystallise and CAS, Maj Gen F H Sykes, issued a memorandum proposing a somewhat optimistic scheme involving a peacetime air force of no fewer than 154 squadrons. Several of these units were to be based at Baghdad which was to become a pivotal waypoint on a projected imperial air route to the east.[2]

Appreciating that civil aviation was not yet sufficiently well developed to be able to undertake long-range commercial operations, CAS's memorandum proposed that, 'State aid shall take the form of inauguration and State ownership of certain aerial transport undertakings of public utility.' This could be interpreted in many ways but it provided an early rationale for the RAF to establish a regular air link between Egypt and Mesopotamia some three years later, shortly before the concept of air control was implemented in the region. This paper will examine the evolution of the desert air mail service as a facet of the development of imperial communications and within the overall context of the air control policy.

Conception of the Desert Air Mail.

Any RAF-run air route between Egypt and India would be largely the responsibility of the RAF's Middle East Area which was commanded by Maj Gen W G H Salmond. To investigate the possibilities, on 30 November 1918 a Handley Page O/400 left Cairo, with the GOC on board. With intermediate stops at Damascus, Baghdad, Bushire, Bandar Abbas, Chabahar, Karachi and Nasirabad, it reached Delhi on 12 December and Calcutta on the 17th. In view of the necessity for ensuring the en route availability of, as a minimum,

HP O/400, C9700, arriving on the Maidan (specifically the Race Course) at Calcutta on 17 December 1918. The crumpled starboard wingtip was the result of an encounter with a tree on the approach.

sufficient quantities of petrol, this project must have been put in hand well before the end of the war.

On his return to Cairo, encouraged by the success of the first flight to India, Salmond wrote to CAS putting forward, among other things, a proposal for the establishment of imperial air routes connecting Cairo both to the Cape and to India. He envisaged a co-operative system with the RAF flying the aeroplanes but certain support services being provided by the well-established travel agency of Thomas Cook & Sons.[3]

Conceptual planning was already well in hand at the Air Ministry, where priority was given to the eastern route. By mid-1919 there were three possible routes under consideration to cover the most difficult stage, that between Cairo and the head of the Persian Gulf, whence the Persian coast was to be followed to Karachi. By the autumn, it had been concluded that the resources necessary to support such an air link would amount to no fewer than seventy-five aeroplanes; forty-nine twin-engined Handley Page O/400s and twenty-six single-engined DH 9As. It is interesting to note that it had already been concluded that two engines would be required for the desert sector.[4]

The use of aeroplanes in the context of imperial communications was certainly appealing and from June 1919 the possibilities were being actively studied by Lord Weir's Advisory Committee on Civil Aviation. On the other hand, the Treasury, while accepting the need for an air link between Egypt and India for strategic purposes, argued that it was premature to be considering any form of scheduled

operation.[5] In October an inter-departmental conference was held at the Air Ministry to consider a proposal involving the British government's committing £100,000 in order to establish the necessary infrastructure (eg emergency landing grounds, fuel caches, weather reporting and wireless stations) to support a route as far east as Basrah. It was assumed that the Indian government would match this sum to cover the rest of the route through the Persian Gulf to Karachi.

Air Mshl Sir Hugh Trenchard (CAS since 31 March 1919) stressed the strategic need for the inter-theatre connection but made it clear that the idea of a regular service had already been ruled out. In his view, before any private contractor or entrepreneur might be tempted to exploit such a facility, the RAF would have to demonstrate that such an undertaking was practical and he proposed to do this by moving an operational squadron from Egypt to India using the route.[6] At the end of the month Lord Weir's committee reported that 'the proper place for initial action is the route from this country to India and ultimately thence to Australia' but recommended that the service should be operated by State-aided private enterprise, albeit using the facilities which it was planned to build for the RAF.[7] Against the combined weight of the Treasury, Salmond, Trenchard (and reality), however, this recommendation gained little support.

The planned deployment of a whole squadron was soon abandoned but, in order to demonstrate the feasibility of flying from Egypt to India, while at the same time providing eight replacement aeroplanes for units already based in India, arrangements were put in hand for such a flight to be made in 1920. As detailed planning proceeded, however, the difficulties and risks involved became increasingly apparent and in May 1920 (by now AVM Sir) Geoffrey Salmond, who had direct responsibility for the enterprise, decided that the existing en route facilities were simply inadequate to support the concept and the proposal was postponed indefinitely.[8]

In fact, it was very doubtful whether the RAF, or anyone else, could have demonstrated the feasibility of such an operation at that time. In the course of 1919 there were a number of notable long-distance flights, including those of the Smith brothers to Australia, Van Ryneveld and Brand to the Cape and Alcock and Brown across the Atlantic. But these were competitive exploratory expeditions, fraught with danger and difficulty and operating at the limits of

HP O/400, D5439, of No 58 Sqn – Rome, 17 May 1919. Both pilots died; the two mechanics on board were slightly injured and a passenger, Lt Col T E Lawrence, broke a collar bone and several ribs.

contemporary technology. All three events had involved the loss of aeroplanes flown by other entrants and, in some cases, fatalities. They no more signalled the immediate introduction of regular air services than did Armstrong's lunar perambulations usher in the immediate prospect of 'away-days' to the Moon.

Salmond's decision to postpone the formation flight to India did not indicate a waning of interest so much as a realistic appreciation of what was practical, as distinct from possible. During 1919 the RAF had been acquiring its first experience of sustained long-distance operations when it redeployed three heavy bomber squadrons from France to Egypt. Beginning in May, the whole process took six months; nineteen of the fifty-one aircraft which set out were written off and eight men lost their lives.[9]

Although a pair of O/400s successfully flew from Baghdad to Basrah and back again in August 1919, this was relatively small beer and, in the light of the substantial experience then being accumulated, it was patently overambitious to be thinking of establishing a route right through to India at that stage. Discussion of an aerial link continued intermittently throughout 1920 but the project eventually foundered when its financial backing was withdrawn. On the grounds that it had only been attracted to the project by the prospect of a *regular* air service, Delhi declined to provide India's share of the

necessary funding and in January 1921 the Treasury refused to sanction the Air Ministry's taking on the cost of the whole project.[10]

Waning interest in the proposed Egypt-India link did not mean that the idea of the RAF's establishing air services had been completely rejected, however, and consideration was still being given to a more modest proposal sponsored by Lt Col A T Wilson, the Civil Commissioner for Mesopotamia. Writing initially to OC 31st Wg at Baghdad on 8 November 1919, Wilson had offered a subsidy of £1,000 per month to assist in the establishment of a regular air mail connection between Baghdad and Cairo, it being anticipated that such an air link might involve a transit time of twelve hours compared to the then normal eighteen days by (mainly) sea. The proposal was forwarded to London where it was discussed on 10 February 1920 at an Air Ministry conference attended by General F H Williamson, the Assistant Secretary of the GPO.

Salmond, representing CAS, was keen on the principle but not on some of its implications. He certainly wanted the RAF to fly the route but he was lukewarm over the involvement of external agencies. His preferred approach was to establish and operate an exclusively military link and then to withdraw when a suitable commercial concern was prepared to take it over. There was dispute about the rates which ought to be charged, concern over the possibility that civilians might become involved as passengers and doubt as to whether the mandatory administration could actually find an annual £12,000. The Treasury was opposed to the use of public funding, considering it to be a disincentive to private enterprise, and shared the RAF's scepticism over Baghdad's financial resources. The proposal was rejected. A few weeks later the RAF offered to carry official mail between Cairo and Baghdad on an opportunity basis but in May even this offer was withdrawn on the grounds that such flights were 'so irregular and occasional' as to render the idea impractical.[11] In point of fact even this was something of an overstatement; in early 1920 'non-existent' would have been closer to the mark.

The RAF's Role in the Maintenance of Imperial Authority.

The establishment of control over Britain's newly acquired tract of empire was proving to be troublesome, particularly in Mesopotamia where authority was disputed by the previous rulers, the Ottoman

Turks, and by various elements of the indigenous populations, notably the Kurds. Colonial pacification was a familiar problem to the British but traditional solutions were hampered by post-war financial stringency and Delhi's increasing reluctance to agree to the external employment of the Indian Army as a free (to London) colonial police force. The problem faced by the British Government was how to devise a means of establishing its authority over its mandates without reducing the nation to penury in the process.

At the same time the RAF also had a problem; it was fighting for its very survival. The service had been created in 1918 as a direct response to a public outcry against the success of German bombing attacks on England in the previous year. By 1919 stringent post-war budgetary restrictions were already leading elements within the RN and the Army to question the need for a separate third service. It was being argued that the creation of the RAF had been merely a wartime expedient and, since there was no longer an air threat to the UK, it followed that the RAF's essential *raison d'être* had evaporated and that its continued existence was therefore both unnecessary and unaffordable.

If the RAF was to survive, the CAS needed to demonstrate that there was a peacetime role for it. The key lay in the cost-effectiveness of air power. Trenchard argued that, while aeroplanes could not do the job entirely alone, a handful of them could patrol vast areas, maintaining order through appropriate offensive action when necessary, or, if this failed, they could convey troops rapidly from central locations to trouble spots. This would significantly reduce the residual number of soldiers required and obviate the need to maintain large and expensive garrisons 'up-country'. It was contended that air power would be a more effective and cheaper way of maintaining imperial control than more traditional methods. The RAF's survival problem could be neatly solved by making it the solution to the Government's imperial problem.

The CAS argued his case and won it. Expressed in 'The Trenchard Memorandum' of November 1919, it was presented to Parliament and endorsed by the Commons the following month.[12] Six weeks later plans for the strength and disposition of the RAF in 1920-21 were published.[13] Sykes' original grandiose scheme had by then been pruned to just thirty-two squadrons, of which twenty were to be based

abroad. Meanwhile, Trenchard was extending his concept of air control by arguing that if air power was to predominate it followed that an RAF officer should command. This too was agreed in principle but it remained to decide where to try out the experiment.

The imposition of Britain's authority over its newly acquired slice of the Middle East was not proceeding at all smoothly and in March 1921 a conference was convened in Cairo to examine the current problems and devise solutions. The meeting was chaired by Winston Churchill, the Colonial Secretary, but until very recently Minister for both War and Air, who was already sympathetic to the RAF's case; Trenchard was in attendance. Detailed proposals for applying the air control policy in Mesopotamia had already been under consideration since February 1920. Although the Cairo Conference decided that they ought to be put into effect, it would take more than a year for the Cabinet to endorse this decision, permitting them to be implemented.

Among the detailed topics dealt with at Cairo was communications and on 16 March Churchill had opened that particular discussion by stating that 'it would be necessary to carry out a far-sighted policy of imperial aerial development in the future. One of the main air routes would undoubtedly be that connecting Egypt with Mesopotamia and India which would shorten the distance (*sic*) to Australia and New Zealand by eight or ten days.' As an initial step towards this goal the conference recommended the early establishment of a regular air link connecting Cairo and Baghdad via Amman. The CAS had already conducted a preliminary study of this proposal, however, and he considered it unlikely that such a route could be operational before the end of the year.[14]

The Establishment of the Desert Air Mail.

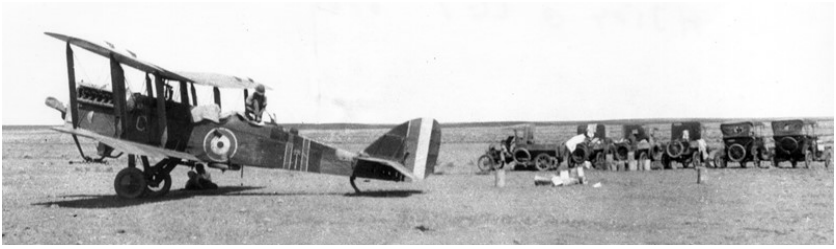
Although the RAF and its predecessors had been operating in Mesopotamia since early 1915, it was February 1919 before an attempt was made to fly from there to Egypt conveying Lt Col Wilson, who was bound for the Peace Conference in Paris. It had not been an easy passage. One of the two DH 4s involved fell by the wayside and, having reached Palestine, Wilson opted-out and completed his journey to Cairo by train. A more successful flight was made in the opposite direction by a pair of DH 9s during March but only one of two DH 9As attempting a second westbound transit in

May managed to stay the course; nevertheless, the one that made it had succeeded in connecting Baghdad and Cairo in a single day.[15] This experience only served to confirm that which was then being accumulated by the transfer of the Handley Pages between France and Egypt, besides which all of the flights to/from Baghdad had been made via Damascus which meant that the connection was dependent upon the goodwill of the French regime in Syria.

The proposed Cairo-Baghdad air route, which was to remain within British-controlled airspace, covered a distance comparable to that between London and Rome or Warsaw and it was clear that the terrain and climatic conditions would make it a difficult undertaking. Much of the Amman-Baghdad sector was some 2,000 feet above sea level which would make take offs difficult (and sometimes impossible for a fully loaded aeroplane) in the heat of the day when summer temperatures could exceed 120°F. On the other hand, there could be overnight frosts during the winter. Dust storms could extend several thousand feet above the surface, higher than many service aeroplanes could fly, and persist for days at a time.

So far as navigation was concerned, the first stage outbound from Cairo was relatively straightforward, since it followed the coast and railway lines to Ramleh before heading inland for about 60 miles across Palestine to Amman, although this involved crossing a mountain range up to 3,500 feet high flanking the River Jordan. By contrast, the second stage, to Baghdad, was across desert terrain with very few distinctive features. In 1921 this sector had never been crossed by air. At that time, the only reliable means of aerial navigation was map-reading and over such empty wastes there was no means of fixing an aircraft's position. Since there were no worthwhile landmarks the obvious solution was to provide some and, during the Cairo Conference, Salmond had proposed using explosives to create a series of craters one mile apart all the way across the desert. This was considered to be a trifle extreme and a more modest solution to the problem of the trackless waste was adopted; it was decided simply to create a track.[14] Immediately after the Conference preparations were put in hand to mount a survey of the route eastwards from Amman.

The Cabinet was initially concerned about hazarding the survey party (it was feared that they might be captured by marauding tribesmen and held for ransom or as hostages to support some political



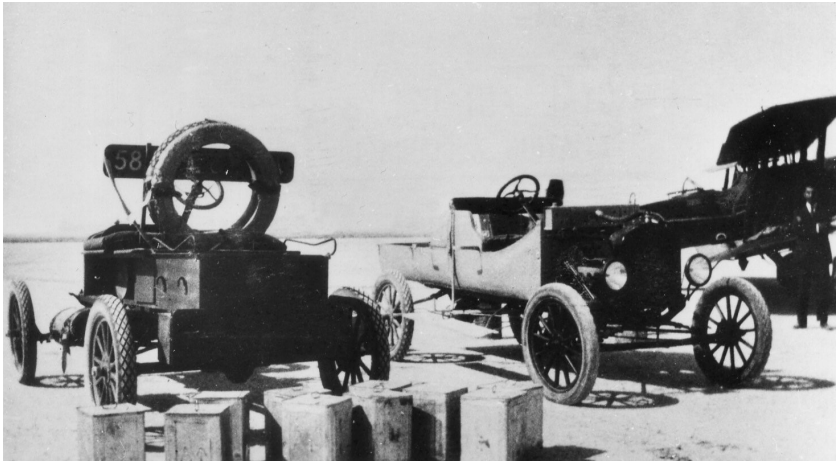
The six Ford tenders of Maj Holt's second Baghdad-based expedition with one of No 30 Sqn's supporting DH 9As (H3504) at LG 3 in June 1921. This aeroplane was written off on 25 June when its undercarriage collapsed when Flt Lt L J Maclean landed it at LG 2.

ploy) and withheld its authority for it to proceed, although Baghdad mounted an initial westward expedition of limited scope in April. This party, mounted on three Ford tenders with an armoured car escort, was led by Flt Lt R C Jenkins of HQ Mesopotamia Group, although the expedition was supervised by an engineer, Maj A L Holt, who kept in touch by air. They left Ramadi, the forward base for a six-aircraft detachment of DH 9As of No 30 Sqn which were to support the convoy, on 6 April, returning on the 14th.

A second foray, this time involving six Fords, began on 5 May, again with Maj Holt in overall charge, with Capt F E Carver, as Political Officer, and Fg Off F R Wynne of No 84 Sqn who, as RAF Liaison Officer, was to advise on the selection of sites for Landing Grounds (LG). By the 12th LGs 1-4 had been identified and marked, about fifty miles apart, and air reconnaissance had been extended 280 miles to the west of Ramadi.[16]

It would have been possible for Holt's party to have continued advancing to the west but this part of Transjordania was under the *de facto* control of Nuri al Shallan, who had played a prominent part in the Arab Revolt. As he was a recent ally, the British did not wish to offend him but, since the precise location of his encampment was not known, it was not possible to seek his permission for the expedition to cross his territory. Holt's party was obliged to turn back.

The Cabinet finally overcame its reservations and at the end of May 1921 permission was granted for the RAF expedition to set out from Amman.[17] The party motored across to Azrak and on 10 June it struck out to the east. The expedition was commanded by Wg Cdr P F



Stripped Ford tenders, a DH 9A and a scatter of 4-gallon flimsies at a refuelling stop during one of the several desert expeditions mounted in 1921-22.

M Fellowes who established his HQ at Amman. The field survey was carried out by a Reconnaissance Car Party led by Sqn Ldr W L Welsh, OC 14 Sqn, accompanied by Capt F G Peake, the Political Adviser from Amman. As well as surveying and marking sites for LGs, Welsh's party marked its passage by dragging chain harrows behind its vehicles to leave a track in their wake.[18]

Air support was provided by a detachment of four DH 9As at Amman provided by the Egypt-based No 47 Sqn. Two HP O/400s of No 70 Sqn were also earmarked to assist if required but, in the event they never were. With the flying shared between Flt Lt E B Grenfell and Fg Offs C A Horn, E R C Hobson and G P H Carter, the DH 9As flew daily sorties to reconnoitre the route 50 miles ahead of the ground party and to deliver supplies, including petrol, as required.

Meanwhile, on 6 June Maj Holt's party had set out from Ramadi again on a ten-day expedition to mark a track connecting LGs 1-4. The Amman party and three of its support aircraft, with Wg Cdr Fellowes aboard one of them, reached LG 4 on the 21st. The next day Holt was flown out to join them and assist in guiding the Reconnaissance Car Party the rest of the way while No 47 Sqn's aeroplanes flew on to Baghdad, thus completing the first aerial transit of the desert route. By

the 26th the last elements of the motorised ground echelon had also reached Baghdad.

The survey was complete and the route had been marked along with eleven landing grounds, Holt's LGs 1-4 and LGs B-H which had been identified by Welsh's party. The only significant incidents had been the loss of two of No 30 Sqn's DH 9As, F2785 which Fg Off J A W Binnie had flipped onto its back on 15 May while attempting to land in the desert to assist another downed pilot, and H3504 which crashed on landing at LG 2 on 25 June, although Flt Lt L J Maclean and his passenger had escaped without injury.[19] Both aeroplanes were burned once they had been stripped of useful spares. At least thirteen pilots had flown in support of the expeditions mounted from Baghdad in the course of which they had logged more than 500 flying hours.[20]

After a false start on 29 June, five DH 9As, flown by Fg Offs W Bentley, H V F Battle, E R C Hobson (with Wg Cdr Fellowes as his passenger), G P H Carter and H W Baggs set off from Ramadi at dawn on the 30th with the intention of making the first flight through to Cairo via Amman. Baggs experienced engine trouble before reaching LG 1 and returned to Ramadi, escorted by Carter. The other three, having landed at LG 4 to refuel from their spare cans, reached Amman after 7 hrs 40 mins in the air. A flat tyre caused Battle to crash on landing, leaving just two to fly on to Egypt. Bentley lost an ignition lead en route, obliging him to land at Rafa but Hobson and Fellowes arrived at Heliopolis (Cairo) without further mishap having spent eleven hours in the air. Their flight had marked the first direct east-west crossing of the desert and the first time that Baghdad had been linked to Cairo in a single day (without using French airspace); it had also provided an illustration of the fragility of the link at that stage.[20]

A letter posted in England reached Cairo by sea on 8 July and the following day it and another, postmarked in Cairo on the 9th, were conveyed to Baghdad by Sir Geoffrey Salmond himself, flying as a passenger in a DH 9A of No 47 Sqn which was provided with a three-aircraft escort from Amman for the desert crossing. The flight was uneventful and clearly demonstrated the potential improvement in communications which the air route represented. During the course of July a total of fourteen aeroplanes flew the desert sector, all without incident.[21]

On 12 July Sqn Ldr Welsh's party began to retrace its steps

An O/400 and a Vimy from Egypt, accompanied by a 30 Sqn DH 9A returning to Baghdad from Amman, rendezvoused with two more of No 30 Sqn's Ninaks at LG 4 on 20 July 1921.

towards Palestine, clarifying the definition of the track and improving the LGs as they went. Four days later Holt's team went back into the desert to conduct an initial survey of a possible route for a projected railway. This took them on a slightly different course but the two converged at LG 4 where the convoys rendezvoused on 19 July. Here they were joined on the 20th by a Handley Page and a Vimy conveying Air Cdre Brooke-Popham inbound from Egypt, a DH 9A from Amman and two DH 9As of No 30 Sqn which were supporting Holt's party.

The air commodore promptly transferred to one of the DHs and, accompanied by another and the Vimy, flew to Rutbah. There the Vimy picked up the Chief of the Aneiza, who, having been wounded in an inter-tribal skirmish, had been brought in by Maj Holt. From there they staged through LG 2 where, short of fuel, the Vimy and its unfortunate passenger were obliged to spend the night. Despite these diversions, all of the aeroplanes had reached Baghdad by the 23rd, except for the Handley Page which had always been struggling with the heat. It got no further than Ramadi where it was stranded 'owing to three pistons having melted.'[20]

Welsh's convoy of cars and tenders pressed on and eventually reached Amman on 26 July without any further significant incidents. Thereafter consolidation of the air link continued, the desert being crossed on a further seven occasions during August, still without encountering any major problems and in the course of one of these sorties Flt Lt M Thomas of No 30 Sqn flew the 866 route miles

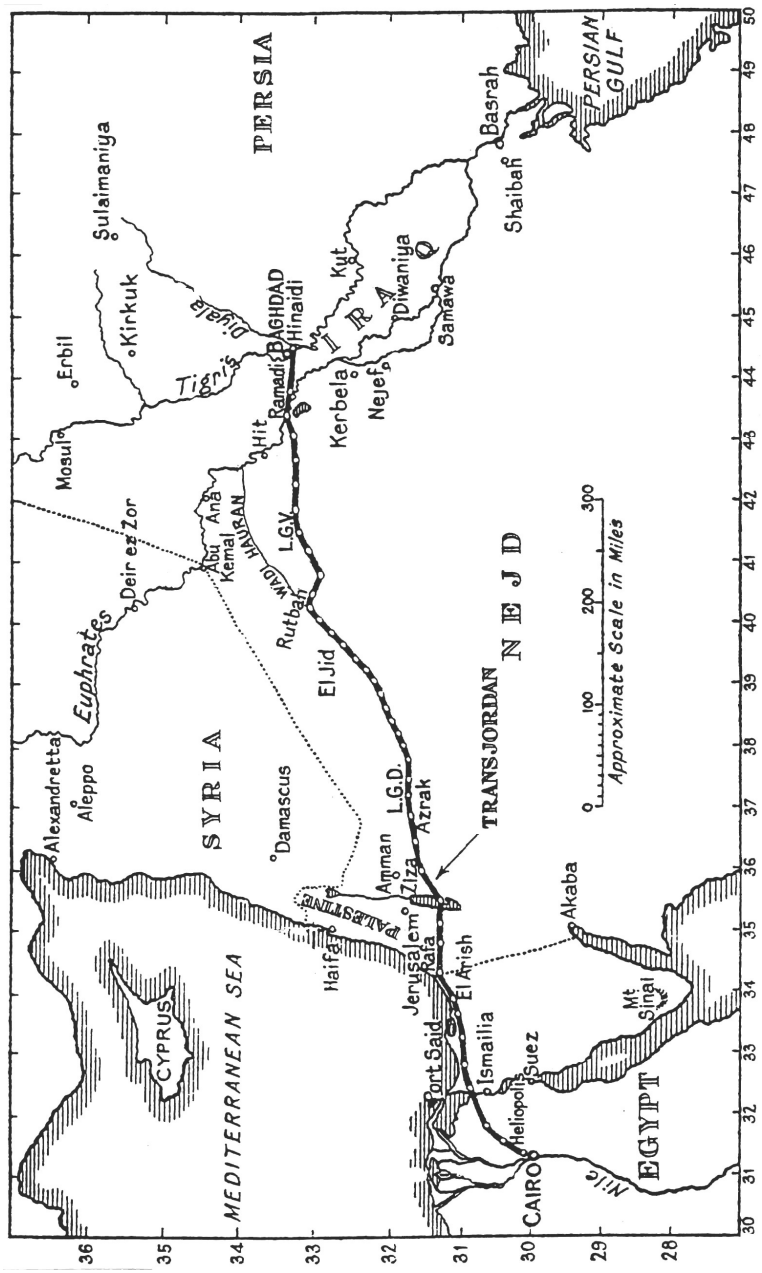
between Cairo and Baghdad in a flight time of just eight hours and ten minutes.

Meanwhile, the first consignment of official air mail had left Baghdad on 28 July, reaching London on 9 August. In the reverse direction the first batch left London by sea on 4 August and was flown from Cairo to Baghdad on the 16th on board a DH 9A and a DH 10 which were joined by a further 'Ninak'[22] at Amman.[23] To begin with it had been announced that only duplicates of official mail would be carried over the desert stage but this restriction was short-lived.

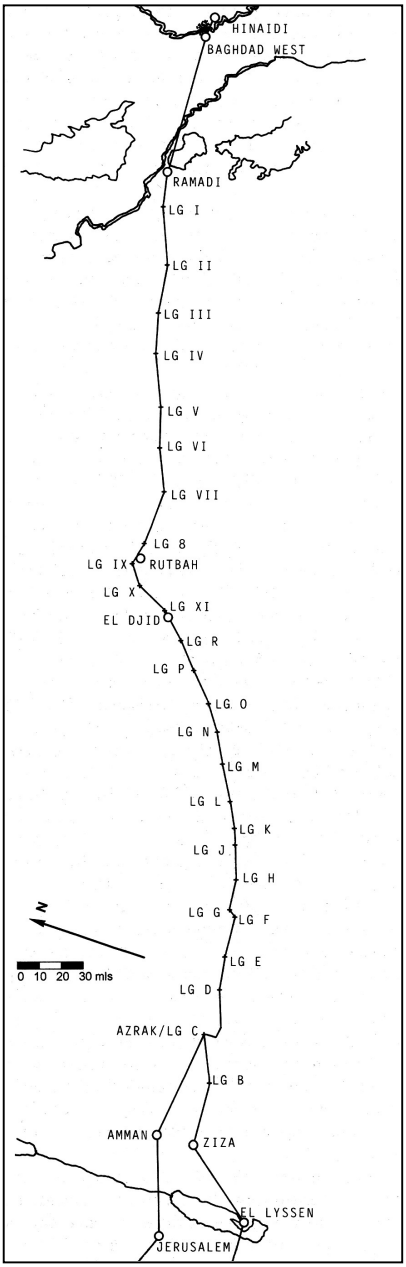
Throughout September aeroplanes continued to shuttle back and forth, building up operating experience, while efforts were made to improve radio links. Although it proved possible on occasion for Baghdad to establish two-way communications with aeroplanes as far west as Azrak and Amman, and on 15 September contact was actually made with an aircraft which had just taken off from Heliopolis, it was concluded that *reliable* two-way contact could only be maintained between Baghdad and an aircraft in the air while the latter was east of LG 4. September was also notable for the first incidents occurring along the route; a DH 9A crashed taking off from Amman on the 1st and a Vimy experienced engine trouble during a desert crossing on the 17th and had to put down at LG 2 where the crew was obliged to spend the night before rectifying the fault and proceeding to Baghdad the next day.[24]

By October the Postmaster General in London and the Director of Posts and Telegraphs in Baghdad were content to grant authority for civil mail to be carried, the first such consignment arriving in Baghdad on the 30th. The initial surcharge for use of the air mail facility by the public was at a rate of one shilling per ounce but by 1923 this had been reduced to three pence.

By late 1921 the service had settled down to a fortnightly run in each direction. Compared to the normal 27 (or more) days, letters posted in London were now reaching Baghdad in an average of 12, sometime less than 10, eg the Christmas mail, which left London on 15 December, was expected to reach Baghdad on the 23rd. The Cairo-Baghdad sector of the service was rapidly gaining in popularity; 57 letters left Cairo on 13 October, 172 on 17 November and 354 on 1 December.[25] Furthermore, the occasional military or diplomatic VIP was being permitted to make use of the facility. Among the earliest



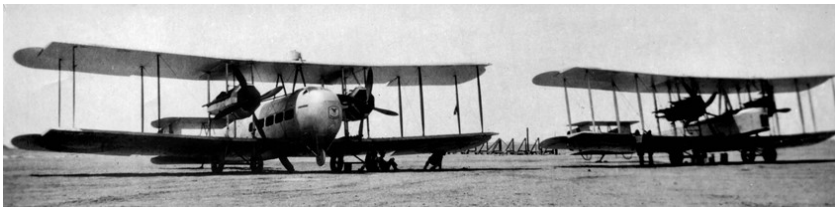
The route as drawn by Wg Cdr Roderic Hill to illustrate his book,
Baghdad Air Mail *(Arnold, 1929)*



The desert sector of the air mail route ran from Azrak to Ramadi, nearly 500 miles. The surface track followed much the same course but meandered where necessary to avoid difficult terrain.

prominent personalities to fly with the mail were Haddad Pasha and Nuri Sheikh Said, both of whom crossed the desert by air during October 1921.[26] As confidence grew, however, the air link later came to be used by British Cabinet Ministers and eventually even by King Feisal and his entourage. With the success of the Desert Air Mail, the case for a railway had been seriously weakened and, in view of the considerable civil engineering challenge which its construction would have represented and the capital outlay which would have been required, this project was shelved.

By late 1921 the air link was being maintained by four units, Nos 30, 47, 70 and 216 Sqns. The first of these operated from Baghdad, the other three were based at the Cairo end of the route. None of the aeroplanes in use, all of which had been designed as bombers, was really suited to the transport role. The DH 9As were single-engined,



The capacious hull of the Vernon compared to the slim fuselage of its predecessor, the Vimy.

which in 1921 was virtually a hazard in itself, and were thus poorly suited to making the long desert crossings. While contemporary twin-engined aeroplanes were incapable of staying airborne on one engine, the residual power remaining after one motor had stopped did at least provide sufficient control to permit a reasonable chance of reaching an emergency LG and/or of making a successful forced landing. Although the Handley Page O/400 had two engines, it was the oldest of the three types available and was shortly to be withdrawn from service on the grounds of its obsolescence. The DH 10s were also twin-engined but they lacked adequate internal freight capacity, were mechanically unreliable and prone to accidents.

What was needed was a purpose-built twin-engined transport aircraft and procurement of such an aeroplane had been put in hand shortly after the Cairo Conference. It was to emerge as the Vickers Vernon, a militarised variant of the Vimy Commercial which had in turn been derived from the Vimy bomber of 1918. The slim, square-section fuselage of the original Vimy was replaced by a cavernous oval hull able to accommodate more than a ton of freight or up to a dozen passengers. Powered (some of its pilots might well have said under-powered) by a pair of Rolls-Royce Eagle engines, the Vernon was to carry out most of the mail flying from 1922 onwards. The first six aircraft reached Egypt by sea in December 1921.

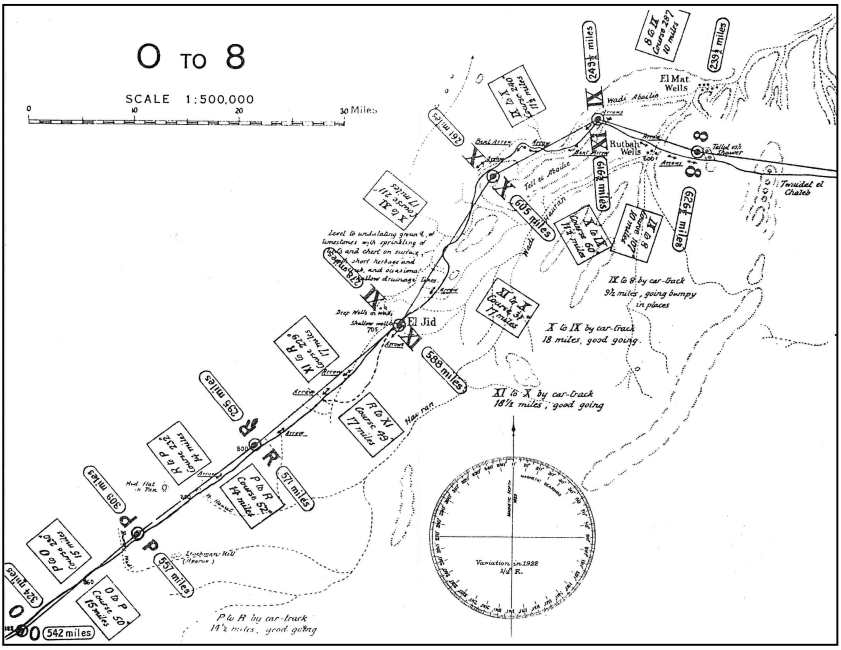
In the meantime, Maj Holt had been out in the desert again. In the course of a series of expeditions beginning on 30 November he re-marked the entire desert sector of the route and established additional LGs. By the time he had finished in February 1922 there was a reasonably level, firm and relatively boulder-free place to land every fifteen to thirty miles. Running east from Azrak, they were lettered as LGs D to R (omitting I and Q), while from Ramadi, heading west,

The Air Mail Route being re-marked with a plough.

they were numbered as LGs I to XI, with the exception of LG 8 whose number was written in Arabic. These designations were literally written on the desert floor within a 20-yard diameter circle. Later on the original Palestine sector was shortened by cutting the Ramleh-Jerusalem-Amman corner with a direct run from Rafa to cross the Dead Sea at El Lyssen and land at Ziza. The downside was that any mail for or from Amman or Jerusalem had to be flown from/to Ziza by No 14 Sqn.

The Egyptian Government's Director of Desert Surveys, Dr John Ball, had been at the disposal of the RAF from the outset. Having accompanied Welsh's eastbound convoy in June 1921, he subsequently produced a route map for use by aviators. The route was subsequently re-marked in the autumn of 1922, this time using an agricultural plough drawn by a Fordson tractor, and again in 1923 and thereafter as required, whenever it began to become indistinct. The map was revised, updated and republished early in 1923 and it remained in use until the mid-1930s.[27]

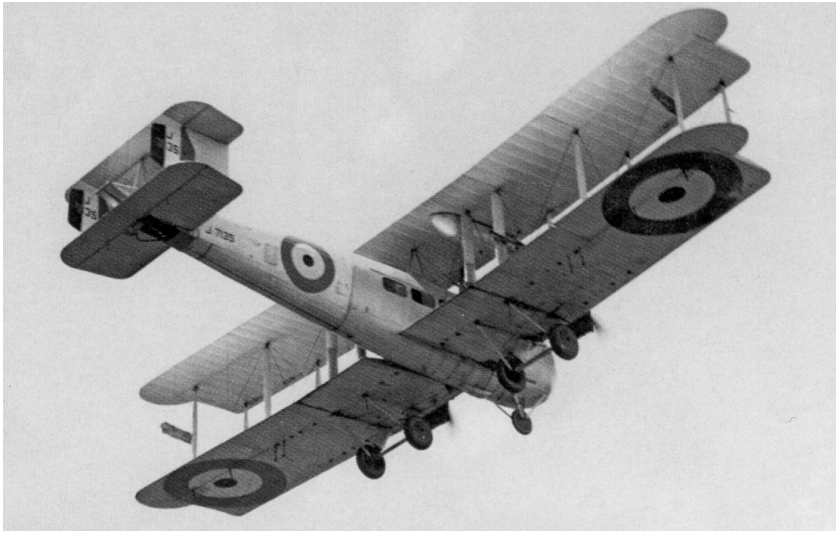
In the early days the mail carriers, predominantly 'Ninaks', were obliged to carry up to a dozen 2- (or 4-?) gallon petrol cans slung beneath their wings to provide their own en route refuelling capability. This highly unsatisfactory practice was superseded by the early provision of an intermediate fuel dump at LG V and shortly afterwards another was established at LG D. Dealing with aeroplanes forced to land to the west of LG R was the responsibility of the HQ in Cairo, usually delegated to Amman, while those which came to grief to the east of LG R were looked after by Baghdad.



One of the twelve pages (the original is in colour) of Dr Ball's 1923 strip map of the whole route from Cairo to Baghdad.

Consolidation of the Desert Air Mail.

Although the extension of the air route to India was still not yet a practical proposition, the RAF's success in establishing the air mail service rekindled interest in this possibility. Although the desert route had fulfilled a sufficiently useful function to have been created on its own merit, the underlying aim remained the eventual establishment of a strategic and commercial imperial air service between England and Australia. The desert link was a means to an end, rather than an end in itself. To assess the progress that had been made (and possibly in anticipation of his appointment as the Director of Civil Aviation (DCA) a few months later) Maj Gen Sir Sefton Brancker, paid a visit to the Near East in December 1921 to inspect the RAF facilities, including those at Shaibah (Basrah).[28] He subsequently reported that the route as far as Basrah was already capable of supporting a commercial operation. Observing that, 'The Arab likes the Englishman but dislikes the tax collector', it followed that private

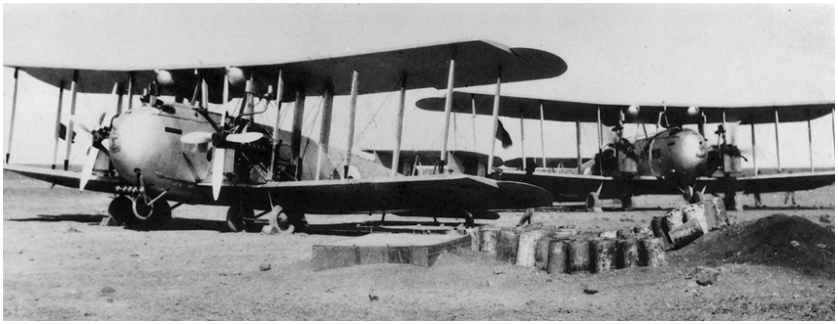


Between 1922 and 1926 the Vernon was the mainstay of the Desert Air Mail service. This one is a Lion-engined Mk II, J7135, of No 45 Sqn; the pennants flying from the outer struts indicate that it was carrying the mail.

enterprise was less likely to cause unrest than government activity and Brancker recommended the early establishment of a civilian-run link.[29] Despite his enthusiasm, the lack of both funding and suitable aeroplanes precluded the immediate implementation of his recommendation.

In the meantime, to enable the RAF to move troops by air to support it in its air policing role it had been decided to reorganise two units as dedicated transport squadrons, to equip them with the new Vernons and to station both of them in Iraq.[30] On 1 February 1922, as a first step towards the assumption of overall control by the RAF, the Iraq Group was separated from Middle East Area and became an independent formation. On 1 April, in the course of a general revision of RAF nomenclature, the Group was renamed Royal Air Force Iraq and assumed the status of a Command. The two transport units, Nos 45 and 70 Sqns, were transferred from Egypt to Iraq in early 1922 and by June they were both stationed at Hinaidi, a newly constructed airfield on the southern outskirts of Baghdad.[31] At first the two Iraq-

Above: A working party from No 70 Sqn installing one of the Bedouin-proof fuel storage tanks. Below: A pair of No 45 Sqn's Vernon IIs at LG V. The secure fuel storage tank is in the foreground along with a pile of discarded fuel cans.



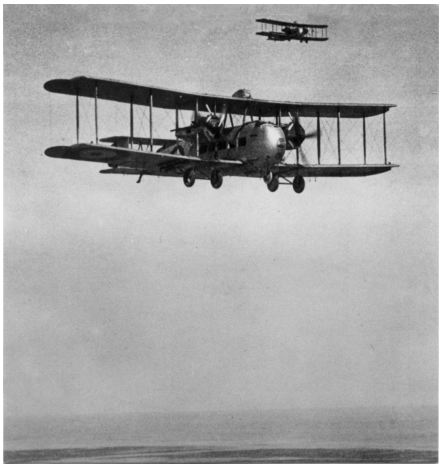
based Vernon squadrons shared the air mail run, supported by Vimys of No 216 Sqn which continued to work the route from Cairo.[32] From September 1923, however, No 70 Sqn assumed sole responsibility for the Baghdad end of the air mail run until October 1924 when this task became the exclusive preserve of No 45 Sqn.

The two Vernon squadrons were not totally dedicated to the carriage of mail. Both were also extensively employed on intra-theatre air transport work which included the deployment of troops when trouble broke out, the maintenance of local mail services to Kirkuk and elsewhere and the delivery of spares to downed aeroplanes. Many

of the latter tasks arose from the air mail commitment, since there were frequent demands for spares for aeroplanes which had been damaged in forced landings or for fuel for pilots who had failed to make it to the next petrol dump. Furthermore, there was a recurrent need to ferry petrol out to LGs D and V to replenish the caches of reserve fuel, either because passing aeroplanes had depleted the stocks or because a party of Bedouin had helped themselves – they wanted the cans, 2- or 4-gallon 'flimsies', rather than the petrol. The security of these dumps was eventually improved by the provision of steel tanks encased in concrete, the whole structure being sunk in the ground and provided with a pump.

Nothing was ever easy in the early days of the mail run and the following account describes a typical incident. On 2 June 1922, a crew was tasked to take a replacement tailplane component out to a Vernon inbound for Baghdad which had been damaged in a forced landing between LGs VII and 8. The relief aeroplane lost its W/T generator en route, however, and was obliged to put down at Ramadi. On the 3rd a second relief aeroplane flew a replacement generator out to the first one and returned to base. The original rescue aeroplane now carried on to LG 8 but broke its tailskid on landing, a very frequent occurrence. On the 4th a third relief aeroplane flew a replacement skid out to the first one; the crew spent the night at LG 8, and returned to Hinaidi with the mail on the 5th. Also on the 5th, however, the incoming unserviceable Vernon taxied to a slightly better site, breaking its tail skid in the process. A fourth relief aeroplane was despatched with more spares for the incoming aeroplane but broke its own skid on landing.

By the 6th the crew of the original relief aeroplane at LG 8 had fitted their new skid and flew back to Hinaidi, leaving the original incoming aircraft and the fourth relief aeroplane still stranded, both with broken skids. On the 7th a fifth aeroplane flew out to LG VII/8 with yet another tailplane component for the incoming Vernon and replacement tailskids for both it and the fourth rescuer. All three crews remained in the desert effecting repairs on the 8th and took off together for Hinaidi on the 9th. Two arrived that day but one aeroplane was obliged to put down at Ramadi with an engine problem, which its crew was able to rectify overnight without further assistance, finally reaching Hinaidi on the 10th. In 1922 this sort of thing was all



Until the advent of the Victoria in 1926, the mail was always flown by a pair of aeroplanes, one acting as reserve; these are Vernon Is.

in a day's work or, to be more precise, in nine days' work.[33]

The round trip from Baghdad to Cairo and back covered some 1,700 miles and took about 25 hours of flying time at an average groundspeed of around 70 mph. It was theoretically possible to fly the Cairo-Baghdad run in a day, but with the available daylight reduced by flying against the sun, this would have allowed no time for mail to/from Amman to be transferred at Ziza, no crew rest and made no provision for contingencies – and contingencies were still the rule rather than the exception. Besides which, the ultimate aim of the Desert Air Mail service was to achieve reliability. It was not a race; speed would come later. To ensure that the mail got through, the route was always flown by at least two aeroplanes, one flying the mail and sporting a Royal Mail pennant, the other acting as reserve.

Some statistics will serve to illustrate the way in which the service developed. In October 1921 it required twenty-three aeroplanes, mostly single-engined DH 9As, to move 700 lb of mail with no capacity for carrying passengers, except at the expense of leaving the second member of the crew behind.[26] During July 1922 the route was flown by just one single-engined and five twin-engined aeroplanes, but between them they had been able to carry a total of eleven passengers and 1,100 lb of mail and freight. Thereafter only twins were used and in September 1922 the mail run was flown by ten Vernons and one Vimy, carrying twenty-three passengers and 1,732 lb of freight. Compared to October 1921, and leaving aside the passengers, this represented something like a 250% increase in output for only 50% of the previous effort – in just one year. The peak load was achieved in July 1923 when 2,200 lb of mail was conveyed, but

the figures quoted for September 1922 are more typical.[34]

In October 1921, perhaps as a symptom of the initial enthusiasm over the early success of the air mail service, a proposal had been put forward by HQ Iraq Group for the provision of nineteen lighthouses (some electrically lit, the majority to be gas-operated) to permit the desert crossing to be made at night.[35] There appears to have been no response to this suggestion until the summer of 1922 when the Air Ministry requested Iraq's views on the feasibility of installing a 35,000 candlepower light at LG V, suggesting that, since such lights could be seen from a distance of 30 miles in England, it should be visible from at least 50 miles in 'the clear air of Egypt' (*sic*).

In the meantime, Iraq Command had evidently had second thoughts about its original proposal and on 30 August Gp Capt Borton[36] vetoed the idea on four counts. First, he pointed out that one light would be of minimal value, since it alone would not permit the 500-mile desert stage to be flown, and the expense of a chain of lights was hardly justified in support of a service which operated at only fortnightly intervals. Secondly, he considered it essential that the lighthouse(s) should be able withstand the depredations of the Bedouin which would mean armour plating and bullet-proof glass or paying what amounted to protection money in the form of a political subsidy. Thirdly, lighthouses were large and cumbersome devices which would be very difficult to transport, erect and maintain in such a remote region and, finally, it was considered that, since night-flying was a comparatively rare activity anyway, the cost and trouble involved was simply not worthwhile. The proposal lapsed.[37]

There was a more positive development in the summer of 1922 when, in August, the first Vernon II was flown at Aboukir, its Napier Lion engines providing 30% more power than the original Eagles. Since the desert floor was already some 2,000 feet above sea level, all operations were routinely conducted under, what amounted to, 'hot and high' conditions and the significant increase in power provided by the Lions, while unable to improve overall performance by overcoming the Vernon's considerable built-in headwind, did significantly increase the margin of operational safety. The uprated Vernons began to reach the squadrons in Iraq in January 1923.

By that time the RAF-operated service was becoming routine and Trenchard considered it to be valuable on four counts:

a. It provided a link between strategic centres of air power and would permit rapid mutual reinforcement in an emergency.

b. It had had a noticeable impact on the Bedouin tribesmen and, contrary to early expectations, the frequent sight of aeroplanes over the desert appeared to have had a tranquillising, rather than a disturbing, effect.

c. It had significantly enhanced the speed of imperial communications between the Colonial Office and Iraq and the Foreign Office and Persia.

d. It had provided sound training for aircrews in sustained long-distance operations over unmapped territory and acclimatised them to Middle Eastern conditions.

He concluded that the cost of sustaining the infrastructure of LGs, fuel dumps, W/T stations and the like was still too great for civil aviation to bear but considered that the returns fully justified the RAF's continuing to operate the route for as long as was necessary. [38 & 39]

In the light of CAS's observations on the lack of an adverse reaction from the tribes it is interesting to note that shortly afterwards it was no longer considered mandatory for the Vernon crews to carry 'goolie chits' – documents expressing, in as many languages and dialects as was appropriate, a promise that a substantial reward would be forthcoming if a downed airman were to be returned to the British authorities, *genitalia intacta*.

The Desert Air Mail Matures.

By 1924 the air mail was working to a standard itinerary. Outbound: Hinaidi to Ramadi (night stop); to Ziza (night stop); to Heliopolis. Inbound: Heliopolis to Ziza; to a convenient LG (night stop); to Ramadi; to Hinaidi. The selection of an LG on the return flight was at the captain's discretion and largely dictated by the time of sunset. Although crews were kept current in night flying there was no reliable instrumentation and, as navigation was still totally dependent on map-reading, it would have been foolhardy to have hazarded the Royal Mail by attempting to fly the route at night without being able to see the track.

Although both of the squadrons at Hinaidi were now flying the more powerful Vernon IIs, desert operations were still not without incident and forced landings continued to be quite common. The cause

Period	Completed as planned	Completed late	Failed	Total Attempts	Failure Rate
Aug-Dec 1921	36	21	13	70	19%
Jan-Jun 1922	31	46	12	89	14%
Jul-Dec 1922	12	33	5	50	10%
Jan-Jun 1923	15	29	4	48	8%
Jul-Dec 1923	12	51	3	66	4%
Jan-Jun 1924	31	21	2	54	4%
Jul-Dec 1924	39	31	0	70	0%
Total	176	232	39	447	9%

Table 1. The improvement in reliability 1921-24.

was nearly always engine trouble which No 45 Sqn experienced on fourteen occasions during the first six months of 1924, a rate of one failure per 136 flying hours; the comparative figures for No 70 Sqn were one failure per 84 flying hours for a total of twenty incidents.[40] Sound maintenance could go only so far towards alleviating this situation, however, as such failures were generally a reflection on the state of the engineering art and the robustness of the materials used to build contemporary aero-engines. Problems occurred with camshaft casings, the camshafts themselves, cooling systems (especially), reduction gears, magnetos and so on, and very often the unscheduled landing would result in damage to the undercarriage. Because of the generous provision of emergency LGs, these incidents were rarely serious, although it often meant that a crew would be stranded in the desert for several nights.[41]

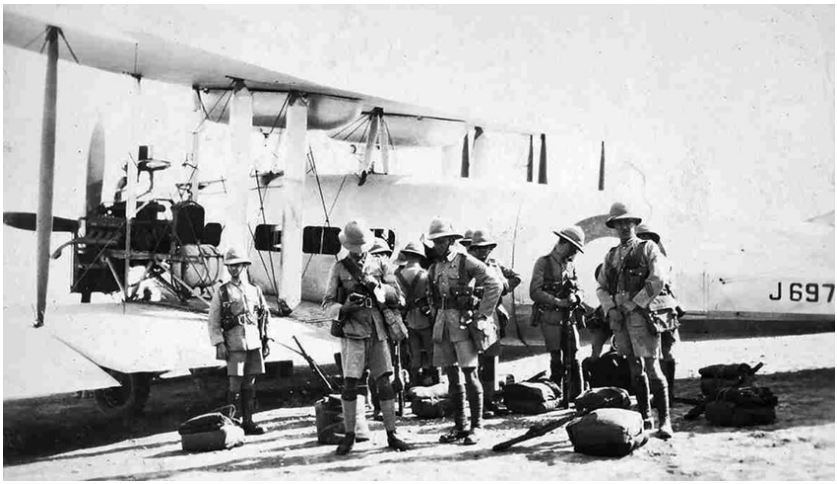
Despite the occasional incidents which still enlivened the air mail run, the aim of reliability was slowly being achieved. Table 1 illustrates the progress that had been made.[40] The figures in the last column show that in 3½ years the failure rate had been progressively reduced from an order of 1-in-5 to zero. Although this aspect was now satisfactory the number of aircraft which completed the journey only after experiencing delays (third column), which could be of several days' duration, was still too high. It was clear, however, that the required overall level of reliability would eventually be achieved. What was needed now was a more powerful, more reliable and more robust aeroplane. The RAF was to carry on flying the mail for a while yet, but it appeared that civil airliners might well be able to take over

In 1923 the Nairn Transport Company began a Baghdad-Damascus-Beirut service, using (above) Buicks and Cadillacs but in 1927 these began to be superseded by (below) 110hp, 16-seater Model 64 Safeway saloon coaches built by the Six-Wheel Company of Philadelphia. With progressively updated vehicles, the service was maintained until 1959.

in a year or so.

In the meantime, the RAF-run air mail service had already been experiencing some commercial competition. In the summer of 1923 the Nairn Transport Company had introduced an alternative communications link by running a fast car service between Baghdad and Haifa via Damascus. It was said that Nairn's Cadillacs and Buicks were (at least notionally) capable of speeds of up to 70 mph – about the same as a Vernon – and somewhat faster if, as was sometimes the case, the aeroplane was bucking a headwind.

Between Ramadi and LG 8 the two services followed a common route and that section of the desert track was kept well-defined by the wheels of the Nairn cars. In August 1925, however, an incidental advantage of air travel became apparent. There was an outbreak of banditry and several vehicles were ambushed and robbed. It was, of course, unlikely that the passage of aeroplanes would be interfered with in this way, although it was still a possibility as an incident in 1926 would show. Although the Nairn operation was a form of rival, the quantity of mail flowing between the UK and Iraq was growing steadily and the service was definitely meeting a need. On the few occasions that the



Along with casualty evacuation, moving troops to trouble spots was one of the many intra-theatre tasks undertaken by the Vernons of Nos 45 and 70 Sqns.

motor service was interrupted the RAF provided additional relief flights to move the excess mail to Amman and Cairo.

The Desert Air Mail Squadrons and Air Control.

Focusing on the development of the air mail service, as this paper does, should not obscure the fact that maintaining the trans-desert link was an integral, if secondary, element of the overall concept of air control and the Vernon squadrons played their full part whenever it became necessary for the unique RAF-run command to exert British authority.[42] Reference has already been made to the contribution made by the Vernons in redeploying troops to trouble spots but they did much more. In this context the arrival of the dynamic Sqn Ldr Arthur Harris in Iraq, where he was to become OC 45 Sqn in late 1922, was of considerable significance.[43]

Harris recognised the operational potential inherent in the big Vernon's weight-lifting capabilities and during 1923, acting largely on his own initiative, he adapted his transport aeroplanes so that they could double as bombers. By the time that Sheikh Mahmud instigated his rebellion in May 1924 Harris' squadron of portly, lumbering Vernon transports was indisputably also the most formidable bomber

An Eagle-engined Vernon I 'bomber' of No 45 Sqn with a typical load for the Sulaimaniya operation in May 1924. The row of five spotlights under the nose was to assist in night landings. Beneath the lower wing a 230 lb bomb is hung behind each undercarriage unit; there is a 520 pounder under the port inner wing and a pair of 112 pounders under the starboard inner wing. The container for Baby Incendiary Bombs (BIB) mounted under the starboard outer wing is balanced by at least two 20 lb bombs on the port side.

unit in the Middle East, and arguably in the entire RAF. When Sulaimaniya was bombed by four squadrons on 27 and 28 May 1924 No 45 Sqn alone delivered 43% of the 64,000 lb of bombs (inc BIBs) which were dropped, including all of the heavy 520 pounders.[44]

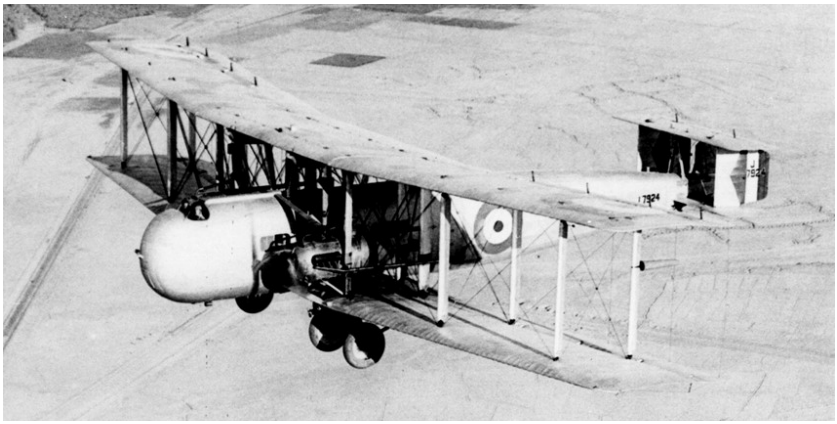
Overconcentration by commentators on the more spectacular aspects of air control, like the bombing of Sulaimaniya, has tended to create an unbalanced perception of the impact of the overall policy and has sometimes involved direct or implied criticism of the RAF. While the pacification of Iraq did have unfortunate consequences for some of those who did not wish (and still do not wish) to be Iraqis, this was hardly the fault of the RAF. If blame for these incidents has to be apportioned then it must lie with the French and British diplomats who had imposed national boundaries on the map of the

post-war Middle East, dividing some settled communities into different 'nationalities' and interfering with the traditional freedom of movement of the many nomadic tribes. The RAF did not devise this situation. The Service did not make colonial policy; it implemented it and at least some of its members may have done so with some distaste.

To balance the bad press which air control has sometimes attracted in the past, it should be pointed out that the concept also had some benign characteristics. The air mail service, which is usually dismissed with little more than a footnote, is a prime example.[45] With no aggressive intent whatsoever, this service was establishing some of the infrastructure which, although originally inspired by British imperial interests, would be of considerable value in the future economic development of Iraq.

There were other humanitarian aspects of air control, sometimes arising from the operation of the air mail route. An example of a wounded sheikh being evacuated to Baghdad as early as July 1921 has already been mentioned but there were other such occurrences. For instance, although traffic was hardly congested in the deserts to the west of Baghdad, vehicles were sometimes observed attempting to follow the air mail track. On 5 October 1923, a pair of Vernons on the return run from Cairo came across a lone motor car stranded in the desert near LG III. They landed to investigate and found it to be full of Armenians who had already been there for three days and were by then in poor condition. A few hours later a Vernon flew out from Baghdad carrying food, water and a Medical Officer. Sqn Ldr d'Arcy Power rendered appropriate medical assistance and, re-watered, re-victualed and with its car repaired and refuelled, all courtesy of the RAF, the little expedition continued on its way.[46]

Incidents such as this represent a 'hearts and minds' facet of air control, an aspect that is often overlooked by journalists and historians, who find it more rewarding to review and criticise the RAF's more aggressive activities, thus distorting the overall picture. While pacification was undoubtedly the basic aim of air control this did not mean that the country was simply to be bombed into submission, and offensive operations were *not* a daily occurrence. By contrast, flying the air mail was an entirely peaceful, positive and regular, if unspectacular, activity.



A Victoria III of No 70 Sqn, in effect, a bigger better Vernon.

The Desert Air Mail Changes Hands.

By the end of 1924 the Nairn operation had proved itself to be a highly reliable and economically successful enterprise and its rate of 2 rupees/lb for mail carried between Baghdad and Beirut or Haifa was extremely competitive. No commercial air service would be able to beat that. On the other hand, the Nairn cars took about 24 hours to complete the trip, whereas aeroplanes could reach the coast in less than ten, so long as they kept going and, increasingly, they did. In a world in which time was becoming a more and more valuable commodity the long-term future of air travel was assured, despite its expense.

Although development of the air connection through to India had not been pursued in 1921, the project had not been abandoned. It had merely been postponed until the accumulation of operating experience and technological advances could permit it to be revived. By late 1924 serious consideration was being given to starting the projected air link from London and even to extending it beyond India. To explore this possibility, between 10 November 1924 and 17 March 1925 the DCA, AVM Brancker, was flown from London to Rangoon and back in Alan Cobham's single-engined DH 50J.

The air mail service was so regular by then that it was beginning to look more like a scheduled airline service than a military operation – which had been the objective all along. In the summer of 1925 the

slightly improved, Vernon III (upgraded Lion engines and additional fuel tankage) began to arrive and from early 1926 the altogether bigger and better Victoria.[47] These were to be the last enhancements made while the RAF retained responsibility for carrying the mail, however, and by this time firm plans were being laid for the service to become a commercial operation.

A formal scheme for a route connecting Egypt to India had been defined by mid-1925 and on 16 November Imperial Airways was commissioned by the Air Ministry to operate a fortnightly service beginning no later than 1 January 1927. Once the contract had been agreed the Air Ministry authorised work to start on a detailed survey of the Persian Gulf sector and in March 1926 the government approved capital expenditure of £38,000 (plus £7,000 annual running costs) to cover the infrastructure of the route extension from Basrah through to India.[48]

In September 1925 Brancker returned to Baghdad, accompanied by a number of Imperial Airways representatives, and spent two weeks re-examining the crucial Iraq Command sector of the proposed UK-India air link. Almost as if to confound the growing air of confidence in the mail run, No 45 Sqn's Sgt Howard Alger set off from Cairo in a Vernon on 22 October and took thirteen days to reach Hinaidi, having been forced to land five times en route with a succession of engine and radiator problems.[46]

Although the RAF's days of carrying the mail were numbered, while the task remained it continued to dominate the life of whichever squadron was handling the service. For example, during 1925, while No 45 Sqn had had prime responsibility for the route, it had accumulated a total of 2,842 flying hours. Of these, 2,034 hours, or 71·5% of the total had been expended on the air mail service.[46] It is interesting to note that, although a proportion of the remaining 808 hours was devoted to maintaining its proficiency in bombing, No 45 Sqn did not even attempt to kill any Arabs in 1925.

In July 1926, with his DH 50J now mounted on floats, Cobham landed on the Tigris at Baghdad, bound this time for Australia. Accompanied by his usual engineer, Arthur Elliott, they took off on the 5th to fly on down to Basrah. On the way a tribesman took a pot shot at the passing aeroplane and killed Elliott. This unfortunate incident served as a reminder, if one were needed, that Iraq could still

Cobham's DH 50J on the beach at Darwin in August 1926 having its sea boots replaced by wheels.

be a very inhospitable place. It also served notice that, while they were less vulnerable than the Nairn cars, aeroplanes were not immune to interference. The planned operations of the aeroplane highjackers of the 1980s were foreshadowed by the random marksmanship of an Arab malcontent in the 1920s; air travel has always been subject to risks other than those inherent in flying. Cobham borrowed an RAF tradesman, Sgt Arthur Ward, from No 84 Sqn at Shaibah and pressed on to Melbourne. Still accompanied by Sgt Ward, he then flew all the way back to the UK, confirming the feasibility of an early extension of the route as far as India and demonstrating that a connection to Australia could eventually become a practical proposition.[49]

To fly the Egypt-India service Imperial Airways had commissioned de Havillands to build them an entirely new aeroplane, the design of which was to reflect the lessons learned from studying the RAF's operations. Prominent among these was the need for airframes of metal, as opposed to wooden, construction and the inadvisability of using liquid-cooled engines in hot climates – the RAF was plagued by boiling radiators in the summer and coolant leakages occurred in all seasons. The new aeroplane, the all-metal DH 66 Hercules, was to have air-cooled engines and, as an added safety factor, three of them.

One of the five three-engined DH 66 of Imperial Airways that took over the Air Mail service from the RAF in January 1927.

The first of five DH 66s to be built for Imperial Airways flew on 30 September 1926.

Throughout 1926 the RAF continued to operate the mail link with ever increasing reliability, not least because of the progressive withdrawal of its older aeroplanes. The Cairo-based No 216 Sqn was re-equipped with Victorias during 1926 and it flew its last mail run with a Vimy on 22 August. Two months later, on 22 October, No 70 Sqn completed the last mail flight by a Vernon. The powerful new Victoria had first been introduced on the route in June and it had proved to be so reliable that the requirement to operate in pairs was waived from September. No 216 Sqn flew the final military air mail service in the first week of January 1927.[46 & 50]

The first Imperial Airways DH 66 had left Croydon on 18 December to position at Heliopolis. A second aircraft followed two days later. The inaugural flight, which was to go all the way through to India, was made by a third aeroplane. Having made a nine-stage ferry flight to Aboukir, it set off from there on 1 January 1927, thus meeting the company's contractual deadline. Staging via Gaza, Ziza, Rutbah Wells, Baghdad, Basrah, Bushire, Lingeh, Jask, Chahabar, Pasni and Karachi it reached New Delhi on 8 January where the passengers were welcomed by the Viceroy, Lord Irwin.

From Shaibah to Karachi the route was still something of an unknown quantity so the DH 66 had been escorted all the way by a

pair of No 70 Sqn's Victorias captained by Wg Cdr H R Nicholl and Flt Lt C L King. This precaution was particularly appropriate in view of the number of VIPs travelling aboard the airliner. They included the Secretary of State for Air and his wife, Sir Samuel and Lady Maud Hoare, AVM Sir Geoffrey Salmond (now AOC India) and the DCA.[51]

By the time that the RAF flew its last air mail trip there were three DH 66s available, one in India, one at Basrah and one at Cairo. Unfortunately, the Persian government had decided to withdraw its co-operation so, to begin with, the commercial service could extend no further east than the head of the Persian Gulf. The first scheduled westbound service departed Shaibah on 7 January 1927, reaching Cairo two days later. The first eastbound service was flown between the 12th and 14th. The transfer of responsibility was complete but it would be March 1929 before the Persian sector was reopened permitting the Egypt-India service to become a reality.

The RAF had met its remit. Despite the early enthusiasm for building an imperial route network it had soon become clear that these proposals were premature. The most difficult sector of the projected route was that between Amman and Baghdad and Trenchard had realised that, using unreliable, war-surplus aeroplanes over largely unsurveyed, hostile terrain and with only a superficial understanding of the problems involved in sustained long-distance flying, there was little likelihood that a commercial operator would risk undertaking such an operation or that any organisation other than the State could afford it. It was a very suitable task for the RAF and it had conveniently provided valuable support for Trenchard's campaign to preserve the new Service. Only when the RAF had established the feasibility of the operation and provided the necessary en route facilities, and when the aircraft industry was able to build more reliable machines, would it be appropriate to allow fare-paying passengers to be carried. This had taken over five years but in that time the RAF had done all that was required of it.

Although the air mail squadrons had, when circumstances dictated, taken a prominent part in offensive actions, their contribution to the air control policy in Iraq had been twofold and far more of their effort had been devoted to plying back and forth peacefully between Cairo and Baghdad than to bombing Arabs and Kurds. The transformation was far from complete in 1927 but the regularity with which the air

mail service operated was in itself a positive contribution to the establishment of stability in Iraq and the eventual creation of a modern state.

Contrary to the way in which it is sometimes portrayed, air control was not *all* blood, bombs and bullets; it had to do with postage stamps as well.

Notes:
All AIR and AVIA references noted below are to Pieces held at The National Archives; LG refers to the London Gazette.

[1] The collapse of the Ottoman Empire in 1918 had left a power vacuum in the Middle East which the Arabs had tried to fill themselves at a series of conferences held in Damascus in 1919-20. Since the Anglo-French Sykes-Picot Agreement of May 1916 had already decided how London and Paris thought the post-war map should look, the ideas of the Arabs were rejected by the British and French who referred the matter to a League of Nations Conference held at San Remo in 1920. On 25 April the region was partitioned, more or less along the lines predetermined in 1916, Syria and the Lebanon being mandated to France, and Palestine, Transjordania and Mesopotamia to the UK. These arrangements were effectively endorsed by the peace treaty between the Turks and the Allies, the Treaty of Sèvres of 10 August 1920, although this was subsequently renegotiated, the Treaty of Lausanne of 8 July 1923 representing the permanent arrangement.

[2] AIR8/6 contains, *inter alia*, a copy of CAS's memorandum of 6 December 1918.

[3] AIR20/607, 'RAF Middle East Policy', contains a copy of Salmond's proposals of 19 January 1919; pps 10-18 are most significant in the context of air routes. Unfortunately, Appendix O, which deals with the estimated costs, is missing; however, references to it within the document indicate that the overall figure was expected to be a little under £100,000 (about £6M today).

[4] AIR2/106/A.17727, 'Aerial Mail Service, Egypt to India. Cairo-Karachi Route' contains a copy of the paper outlining the resources necessary to operate the Egypt-India route. It is undated but, judging from the dates of the documents that it is filed between, it was probably raised circa October 1919.

[5] *Ibid*. This file contains several papers stating the Treasury's position.

[6] *Ibid*. This file contains, at Enclosure 75A, a record of the discussion which took place on 5 October 1919.

[7] AVIA2/1714 'Establishment of Advisory Committee on civil aviation: report on Imperial Air routes' dated 30 October 1919.

[8] AIR5/207/150183/20. The intention of carrying out the Egypt-India flight was publicised by one of the periodic memoranda circulated by the Director of Air Organisation, AO 1458 of 17 March 1920. Its postponement was announced by AO 1469 of 5 May 1920.

[9] AIR6/20. Figures extracted from Air Council Précis No 446 of 26 January 1920, 'The Report of the Committee on No 1 Aerial Route', which operated between May

and December 1919. The units involved in the deployment were Nos 58, 214 and 216 Sqns each of which began the move with ten Handley Pages; replacements were furnished by No 207 Sqn. Forty-five of the aeroplanes that attempted the transit were O/400s, the last six were Vimys. Of the nineteen aircraft lost, all O/400s, six crashed due to a technical defect and four as a result of pilot error representing an accident rate of one every 9,311 miles flown. But if the ten destroyed on the ground by gales and one condemned as unairworthy are added, the overall write-off rate was one per 4,900 miles flown.

[10] AIR5/2/Part 3. Air Ministry Fortnightly Report No 24, Sect 3, para III records the Treasury's decision.

[11] AIR5/207/158394/20 'Air Mail Service between Mesopotamia and Cairo, 1919-21' contains relevant correspondence, particularly at Enclosures 13A, 51A and 56A.

[12] The Trenchard Memorandum of 25 November 1919 was subsequently presented to Parliament by the Secretary of State for Air, Winston Churchill, as Cmd 467 of 11 December 1919. A copy is in file at AIR1/17/15/1/84.

[13] AIR2/119. The initial deployment of the peacetime air force in 1920/21 (squadron number plates, locations, strength in aeroplanes, etc) was publicised internally by the Director of Training and Organisation, Air Cdre P Game, in his Air Ministry letter 165000/20 (O.1) of 30 January 1920 which went to 53 addressees within the RAF.

[14] AIR8/37. Report on the Cairo Conference of 12-30 March 1921.

[15] AIR10/1849. AP 125, 'A Short History of the Royal Air Force', pps 434-435.

[16] AIR20/534 and 544. War Diaries of Mesopotamia Group for April and May 1921. Note that the designations applied to the LGs 1-4 identified by Maj Holt's westbound expeditions were relatively short-lived and should not be confused with what became the permanent LGs I-IV *et al* that were established later in the year.

[17] AIR5/219. 'Alternative routes for Air communications between Egypt, Palestine and Mesopotamia, 1921-25' contains correspondence relating to the initial desert surveys and early use of the route; of particular significance are Enclosures 11A, 17A, 19A and 58.

[18] Sources differ as to the vehicles involved. HQ Middle East Operation Order No 21, dated 28 April 1921 (AIR23/799), had authorised the use of two Rolls-Royce armoured cars, two tenders and six light tenders 'fitted for desert work', which included two Lewis guns and twelve Mills grenades. But, according to an extract from the Operations Diary of No 30 Sqn covering the period between 1 April and 22 July 1921 (also in AIR23/799) they were actually mounted on 'six Crossley tenders and three Rolls-Royce chassis fitted with light tender bodies and machine guns.' Since the first was a plan, whereas the second was an observation by an eyewitness, the latter is considered to be more likely to be accurate.

[19] AIR20/544 and 545. War Diaries of Mesopotamia Group for May and June 1921. Note that, while air operations were attributed to No 30 Sqn, not all of the pilots were actually on the squadron's ration strength. Flt Lt Maclean, for instance was with the Central Air Communication Section.

[20] AIR23/799. Extracts from the Operations Diary of No 30 Sqn for the period April-July 1921. This includes a record of the flying hours accumulated by the unit specifically in connection with the establishment of the 'Amman-Ramadi air route' as

follows:

	Hrs	Mins
Flt Lt L J MacLean	55	34
Flt Lt M Thomas	86	15
Fg Off F J H Ayscough	15	25
Fg Off J R Bell	11	55
Fg Off J F T Barrett	72	55
Fg Off H F V Battle	29	35
Fg Off G C Bladon	14	05
Fg Off H W Baggs	67	25
Fg Off W Bentley	34	55
Fg Off J A W Binnie	53	55
Fg Off S T B Cripps	1	20
Fg Off G A Gowler	40	05
Fg Off H G W I Lock	28	00
Total	**511**	**24**

[21] AIR20/546. War Diary of Mesopotamia Group for July 1921.

[22] The RAF phonetic alphabet in use at that time for voice radio transmission rendered the letter A as 'Ack', thus the de Havilland DH 9A became the Nine Ack, or 'Ninak' in Service *patois*.

[23] AIR20/547. War Diary of Mesopotamia Group for August 1921.

[24] AIR20/548; War Diary of Iraq Group for September 1921.

[25] *Flight*, 22 December 1921, p836.

[26] AIR20/549; War Diary of Iraq Group for October 1921.

[27] A copy of the 1923 edition of the 'Pilot's Handbook of the Cairo-Baghdad Route' may be found among Wg Cdr Norman Macmillan's papers at the Imperial War Museum. It was rendered redundant by a pipeline laid in 1932-34 to connect the oilfields of Kirkuk to a Mediterranean terminal at Haifa via Haditha (there was a second pipeline running across French-controlled territory between Haditha and Tripoli). Oil began to flow to Palestine in January 1935 and thereafter an aircraft needing to make an intermediate stop did so at one of the strips established alongside the pumping stations at H1, H2, Rutbah, H3 and H4, which had replaced the original twenty-six primitive landing grounds.

[28] Although by then a civilian, as a retired RAF officer Maj Gen Brancker had been re-ranked as an air-vice marshal on 1 August 1919. Nevertheless, he preferred to use, and in the early 1920s he is invariably referred to by, his military title. Following his appointment as DCA on 22 May 1922, however, this became a little inappropriate and he eventually adopted the RAF equivalent; he first appears in the Air Force List as an air-vice marshal, rather than a major-general, in the January 1924 edition.

[29] AVIA2/119. 'Cairo-Baghdad air route: report on by Major General Sir W S Brancker' dated 27 January 1922.

[30] Air Ministry Weekly Order (AMWO) 762 of 29 September 1921 had announced that the name Iraq had superseded that of Mesopotamia.

[31] AIR5/1239. HQ Middle East monthly summaries of operations, Vol I covering 1921-24. The original distribution of the squadrons of the post-war RAF had envisaged there being only three in Iraq. The implementation of the decision to experiment with air control involved an increase in local RAF strength to eight squadrons. The transfer of Nos 45 and 70 Sqns from Egypt was part of this expansion.
[32] No 216 Sqn had disposed of its unsatisfactory DH 10s in favour of Vimys between June and October 1921.
[33] AIR5/1287. Iraq Command: Monthly Operational Summaries, Vol I (covers 1921-23).
[34] *Ibid*.
[35] Since map reading was the only practical method of aerial navigation at this time, night flying over a dark or blacked-out region was only feasible with some form of artificial assistance. The proposed use of lighthouses was a reversion to the method used in France in 1918 to permit night bombers, and eventually night fighters, to find their way about in the dark.
[36] Gp Capt A E Borton was Officer Commanding, HQ Iraq Group; he was made up to acting air commodore on 31 August 1922, the day after he had written his letter.
[37] AIR5/219, *op cit*, contains correspondence relating to the question of lighthouses; Enclosures 61A, 78A and 83A are particularly significant.
[38] AIR9/13 contains, at Enclosure 3, a copy of Trenchard's memorandum of 11 December 1922 in which he assessed the value of the air mail route. It was subsequently circulated to the Cabinet by the Secretary of State for Air and a copy of this version is at Enclosure 3 on AIR8/57.
[39] With hindsight, Trenchard's observations on the value of the training being gained by aircrews flying the air mail service probably fell a little short of the mark. Only time would demonstrate this but the experience of desert operations and the qualities of leadership and self-reliance which this bred led to a disproportionate number of air mail veterans becoming very senior officers in later years. Ten of the pilots who flew with No 45 Sqn in the five-year period between 1922 and 1926 would achieve air rank with eight more being groomed by each of Nos 70 and 216 Sqns, and two of No 70 Sqn's stores officers would also become air commodores.
[40] Statistics extracted from a 'Report On The Flying Carried Out By The Royal Air Force During The Year 1924', prepared by S.5 Stats and dated 26 March 1925. A copy of this document is held by the Ministry of Defence (Air Historical Branch).
[41] In his *Baghdad Air Mail* (London; Arnold; 1929) Wg Cdr (later Air Chf Mshl Sir) Roderic Hill conveys a graphic impression of the Iraqi terrain and describes many of the incidents which occurred during his time in command of No 45 Sqn, 1925-26.
[42] The command of all military forces in Iraq had been transferred to the RAF on 1 October 1922 when AVM Sir John Salmond (brother of Sir Geoffrey) had relieved Maj Gen Sir Theodore Fraser. To avoid any unfortunate inter-Service wrangles, Sir John was also gazetted as a temporary major general for the duration of his appointment as GOC/AOC Iraq Command, the first in which ultimate military authority was vested in an RAF officer.
[43] Later Marshal of the Royal Air Force Sir Arthur Harris, and AOCinC Bomber Command, February 1942-September 1945.

[44] AIR5/1254. Operations, Iraq, Ch 14-25, contains a wash-up on the preparations for, and conduct of, the bombing of Sulaimaniya on 27 and 28 May 1924.

[45] In the 260 pages of his otherwise comprehensive scholarly account of air control policy, *Air Power and Colonial Control*, (Manchester; Manchester University Press; 1990) David Omissi devoted just two paragraphs (on pages 135-6) to the air mail. The fact that the photograph of a Vickers Vernon (following page 82) is incorrectly identified as being of a Victoria may be another symptom of the lack of attention paid to this benign aspect of air power and colonial control.

[46] AIR5/1254. Operations: Iraq, Ch 14-25. Reports on operations conducted 1924-28.

[47] While production Victoria IIIs did not begin to reach the squadrons until 1926, No 70 Sqn had been flying the prototype Victoria I on a trials basis, including using it on the mail run, since 1924.

[48] AIR5/2/Pt.VI. Air Ministry Monthly Report No 125, Pt V, para 33. £38,000 in 1927 would be worth roughly £2M in 2017.

[49] LG 8 33209, 6434. In recognition of his contribution to the success of Cobham's expedition, on 8 October 1926 350252 Sergeant Arthur Henry Ward was awarded the Air Force Medal.

[50] It is interesting to observe that American domestic practice had closely paralleled that of the British in Iraq. The sheer size of their country presented the Americans with an internal communications problem on what amounted to an imperial scale. The use of aeroplanes was as appropriate in America as it was in Iraq, especially in the more rugged regions, and the US Army Air Corps had initially flown the US Air Mail for much the same reasons as the RAF had flown the Royal Mail in Iraq. With the increasing reliability of newer aeroplanes, however, in January 1927 tenders were invited from the fledgling US airline industry to assume responsibility for the carriage of the mail. In much the same timeframe as it was happening in the UK, therefore, the American aviation industry began to design a first generation of purpose-built airliners and flying the mail became a commercial undertaking.

[51] AIR27/613. Operations Record Book, No 70 Sqn, 1926-39.

Peter Elliott notes that the early publicity afforded to the Air Mail via the daily press and updates in aviation magazines, like Flight*, was clearly sufficient to catch the imagination of a pupil at Mill Hill School. This poem was published in* The Mill Hill School Magazine *as early as June 1922. The author was probably Ronald John Sapwell who was at the school 1920-23.*

THE AERIAL MAIL
CAIRO – BAGHDAD, 1922

[AUTHOR'S NOTE: Machines of the R.F.A. (*sic*) have, for a considerable period, been running a regular Mail Service between Cairo and Baghdad. During- the summer of 1921 a convoy of armed tenders and cars journeyed across this vast expanse of desert to select suitable landing-grounds for the air-craft. Their Tracks, periodically renewed, form a thin visible connecting link between civilization and civilization.]

Clean cut against the first faint flush of Dawn,
Their silvern planes outstretched to catch the Sun,
Hastening to meet the Day as yet unborn,
Faint upon Earth their engines' muted hum.
Below – the Desert lies in shadow dim,
A vast, inverted bowl of yellow sand.
The distant Hills, eternal guardians grim,
Flanking the entrance to a barren land.

For His Majesty's Mails are travelling East.
(Mark the Track as it winds below.)
His Majesty's Mails are travelling East.
(Six hundred weary miles to go!)

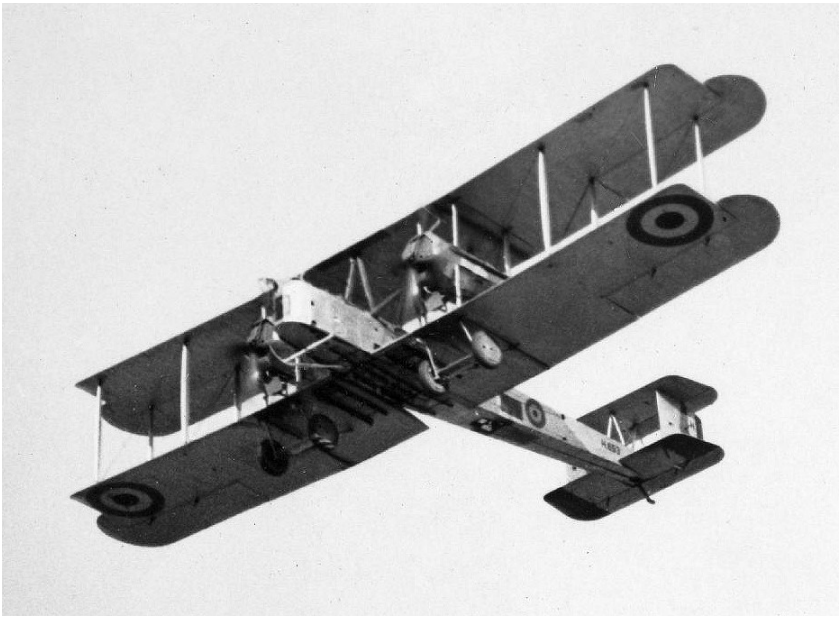
The ashes of a fire – lit all in vain –
A Thing that breathed and lived but yesterday,
The charred and blackened wreckage of a 'Plane,
Are all that mark the Man Who Lost his Way.
The mistake of half a minute; a side-slip in a cloud;
He failed to mark the Track he thought he knew,
Then endless days of waiting – by Fear and Hunger cowed –
Ere the Jackals took the meat that was their due!

For His Majesty's Mails are travelling East.
(The Track is obscured in the sand below.)
His Majesty's Mails are travelling East.
(Only two hundred miles to go!)

In the bitter cold of Winter, when the sullen engines fret.
And the leaden sky above them bids them stay,
In the storm or in the sunshine; in the dry or in the wet,
The Air Mail passes swiftly on its way.
In the hottest days of Summer, when the water-holes are dry,
And the Desert's full of things that are not there,
The gaunt and weary Jackal sees the shadows passing by
Of the Mail 'planes as they hurry through the air.

For His Majesty's Mails are travelling East.
(The Arrow is pointing the way to go.)
His Majesty's Mails are travelling East.
(Baghdad City, to port, below!)

R. J. S.



When RJS was composing his poem, the mail was being flown by Eagle-engined Vimys of No 216 Sqn, like this one.

ERRATA

A larger crop than usual, one reason being that unavoidable time constraints precluded the editor's being able to submit the page proofs for Journal 65 to Dr Tony Mansell for his customary forensic final check, which would certainly have weeded out, at least some of, what follows.

On page 22, Geoff Simpson has pointed out two errors in Min Larkin's piece, both of which your editor really should have spotted.

a. The units with which Donald Finlay flew during the Battle of Britain were Nos 54 and 41, not 43 and 56, Sqns.

b. Geoffrey Alford should have read Geoffrey Allard.

Gp Capt Phil Rogers has observed that the OACTU is the Officer and Aircrew Cadet Training Unit and not, as noted in the Glossary on page 5, the Officer and Air Crew Training Unit. Again, the editor ought to have spotted this, but in this case he was seduced by Comdt Cranwell (see page 56).

Air Cdre Mike Allisstone points out that on page 100, line 2, 'Chief of the Staff' is missing its 'Air' and, on page 52 'Batchelor' is misspelt – twice. Oddly enough, the latter failed to trigger the spellchecker programme on the editor's computer. That aside, however, he really should have seen both of these himself, and, had our proof reader been fielding at long-stop, he certainly would have.

BOOK REVIEWS

Note that the prices given below are those quoted by the publishers. In most cases a better deal can be obtained by buying on-line.

Gardening by Moonlight by Peter Kaššák and David Gunby. Only (at the time of writing) available via Lulu.com; 2017. €15.85.

Gardening by Moonlight is an account of the mining of the River Danube by No 205 Gp in 1944. The Danube was, and is, a major commercial artery and, for Germany during WW II, it provided a means of importing, crucially, processed oil products from Romania and Romanian crude to refineries in Hungary and Austria. The first attempt to disrupt oil supplies was the disastrously expensive low-level attack on Ploesti carried out by the USAAF on 1 August 1943 – 54 aircraft, of 177 despatched from North Africa, failed to return. This was not attempted again until the following April when, by then based in southern Italy, the Americans mounted the first of 22 further attacks before Romania switched sides in August.

At the same time, April 1944, the RAF, also operating from the complex of airfields around Foggia, began its mining campaign. This was, inevitably, intermittent because it involved delivery of ordnance, often from low level, which meant that operations were constrained by the availability of a reasonable degree of moonlight. The result was that the campaign was mounted in seven week-long phases. Note that, despite the August *coup d'etat* in Romania, the upper reaches of the Danube remained under German control and disruption of river traffic was still considered to be worthwhile until the last raid was carried out as late as 4/5 October 1944.

The book provides, as an initial background, some facts and figures on Germany's oil problem, and the significance and scale of the contribution made by the Danube, and some notes on the aeroplanes involved, primarily Wellingtons and Liberators, and the mines they dropped. Thereafter the bulk of the narrative is a chronological account of each day's operations presented in seven chapters to reflect the seven full moon periods. Each chapter is amplified by the occasional first-hand account, includes details of aircraft lost with notes on the fates of their crews and ends with an appreciation of the effectiveness of that phase of the campaign. Some of the latter are a

little staccato, perhaps a result of having been translated from the original Slovak; nevertheless, they serve their purpose well enough. The text is supported by more than 100 photographs, mostly of aircrew but including some of aeroplanes, equipment and rivercraft.

Of some interest is the account of the relatively large scale minesweeping operation carried out by Ju 52s equipped with a degaussing ring similar to that of the Wellingtons that swept the Suez Canal. What will be of particular value to the historian is the statistical information contained in the final chapter and four appendices. This data includes the number of sorties launched, and mines delivered, by date and squadron, and a list of well over 200 vessels (date, name, tonnage, operator, location) believed to have been sunk by British mines. There are other impressive figures, for instance, following each phase of the campaign the lower Danube would be closed to traffic for several, sometimes as many as twenty, days. Its impact on the supply of oil was significant. In March 1944 172,000 tons of oil was moved up-river from Romania; by August this had fallen to 33,000 tons.

This 158-page softback tells a little-known story and, as such, represents a very worthwhile contribution to the annals of the RAF.
CGJ

A Spitfire Girl by Mary Ellis as told to Melody Foreman. Frontline Books, 2016. £25.00.

Subtitled 'One of the World's Greatest Female ATA Ferry Pilots Tells Her Story', this is a remarkably vivid account of a passion for flying and its fulfilment in the service of the Air Transport Auxiliary. In her late 90s, Mary Ellis (*née* Wilkins) recounts her story to journalist and author Melody Foreman. The emphasis is on her World War II experience, complemented by pre- and post-war life, including as airport manager at Sandown on the Isle of Wight.

Foreman's work is based mainly on Ellis's recollections, recounted in a series of meetings in which the two women clearly established a warm friendship. She has supplemented the work from other sources, notably an interview with another ATA stalwart, Molly Rose. She has also drawn extensively on Ellis's logbooks.

Told in 23 short chapters (the narrative is 193 pages in total), the book is episodic and anecdotal. The writing captures the authentic voice of the subject, with no apparent dimming of enthusiasm or

memory over the years. Some chapters on flying with the ATA describe incidents with sufficient detail to satisfy the curiosity of members of this Society. She gives a notable account of flying a Wellington bomber when the cockpit access hatch fell open. In her words: '[I] looked down from my seat, there was the earth whistling past, and the draught was almost blowing me through the roof … I decided to trim the aircraft so that it would fly on an even keel, then undo all of my straps and climb down and close the door, being extremely careful not to fall out'. This incident embodies so much of what ATA flying encompassed. Alone in this large aircraft, Ellis had only brief pilot's notes on how it operated, no radio and she was obliged to fly within sight of the ground. It was for her to judge how to handle the incident, on a relatively unfamiliar type, and deliver the aircraft to the intended destination.

Without claiming to be a history, the book includes glimpses of women in aviation prior to the outbreak of war, the establishment of the ATA and the decision to include female pilots. Employment of women was by no means a universally approved idea. Ellis does not shy away from instances of prejudice and discrimination that she encountered, though she softens the tale with humour. Foreshadowing the experience of the RAF's first female pilots in regular service in the 1990s, she has mixed views of media coverage at the time. She also addresses fear, loss and the need to keep going.

The work suffers from its reliance on oral testimony, which has a tendency to be somewhat disjointed. Even within chapters, it is difficult for the reader to keep a sense of the timeline and the topic. The chapter headings could have been chosen with more care to signpost the content. 'Forced Landing' contains a paragraph on such an incident, but otherwise we learn about Polish members of the ATA and a female pilot from Chile, amongst other stories. The narrative could also have been improved if either the author or the publisher had observed and addressed inconsistencies. For example, in successive chapters, we are told that the Kemble airfield is in Wiltshire and then in Gloucestershire. Likewise, Foreman could have aided her readers by eliminating repetition – twice on page 69, we are told that the Tiger Moth had a top speed of 60mph.

The book contains 16 pages of black and white photographs. There are detailed appendices on deliveries of Spitfires, Hurricanes,

Swordfish, Wellingtons, Typhoons, Tempests and Mosquitos. There are also appendices on the different types flown in short spaces of time which serve to illustrate the tempo of work, a full list of aircraft types flown and another of airfields used during her ATA service. It comes with a comprehensive index.

Once I stopped letting irritation over style and structure interfere, I enjoyed the book for its evocation of a remarkable woman's life. Even today, some people find it difficult to accept that women can perform professional roles such as piloting aircraft. How much more challenging was it in the 1940s for young women such as Mary Ellis to make this significant wartime contribution in the face of resistance? Without overemphasising the problems faced by women who wanted to fly, Melody Foreman gives us an insight into Mary Ellis's long career in aviation. The work carried out by the men and women of the ATA deserves to be kept in the public eye. This book is a further contribution to its recorded history. Despite its limitations, it is worth reading.

Gp Capt Kathleen Sherit

On Atlas' Shoulders by Chris Gibson. Hikoki; 2016. £29.95.

Chris Gibson is gradually working his way through the various projects that have led to the aeroplanes and missiles that have equipped the RAF during the post-war years. Having previously examined the deterrent, air defence and maritime roles (see Journals 51, 55 and 61), this book is subtitled *RAF Transport Projects Since 1945*.

Compared to the earlier volumes in the series, this one shows signs of having been rushed into print without having been adequately proof read. This manifests itself in two ways. First, there is a degree of repetition. It is, of course, accepted that it was occasionally appropriate to recycle some information, eg the dimensions of a typical load, in the context of different aircraft projects discussed in separate chapters, but to provide, for example, the vital statistics of a Chieftain tank on page 149 and again only two pages later is overkill. Rather more annoying is the excessive incidence of typos, eg copula for cupola, ration for ratio, omitted definite and/or indefinite articles, and amended passages with some of the original text still present. I noted more than thirty of these, and the double-takes that they

Only 20 were built, but the Budd RB-1 Conestoga of 1943 had reflected the ideal configuration for a military freighter.

provoked made for a bumpy ride in places.

Having got that off my chest, what of the actual content? It follows pretty much the pattern established by the preceding books. An initial chapter considers some of the key functions of a military transport aircraft and the way in which they influence their design, leading to the ideal configuration – a high wing and tricycle undercarriage, housed in the engine nacelles or sponsons, to create an unrestricted and level hold more or less at truck-bed height, with an upswept tail providing access via a full-width opening incorporating a loading ramp. This layout was first employed by the Budd Conestoga as early as 1943 but it took a surprisingly long time for it to be adopted as the norm, as in the classic C-130 of 1954. Other factors considered are the pros and cons of various types of power plant, factors affecting hold dimensions, the delivery of freight and men by parachute and so on.

The subsequent narrative focuses on the solutions devised by industry to satisfy a succession of Air Staff Requirements, but it is underpinned throughout by insights into the recurrent differences between the RAF and Army as to what the specific nature of those requirements ought to be. Evolving foreign policy was a major influence, of course, with the withdrawal from empire dictating a switch from garrison forces, with their heavy equipment already *in-situ*, supported by locally based tactical transports, to what we now call expeditionary warfare in which everything has to be moved from the UK, over long distances and against the clock, and then deployed in-theatre. That introduced another problem, that of the need to be able to detour around the airspace of nations that might deny permission to overfly, which further influenced the range aspect of post-colonial specifications. All of these factors, and others are considered as the story unfolds.

In the 1940s and ‘50s the RAF made do with its side-loading, tail-dragger Yorks, Hastings and Valettas, all essentially extrapolations of

WW II bombers, with the cabin of the latter inconveniently bisected by the main spar. The first purpose-built British freighter to reflect the ideal layout was the Beverley which, so long as it was employed as intended, pretty much did what it said on its tin. From the 1950s onwards industry beavered away proposing extrapolations of existing aeroplanes in response to a series of specifications, like Beverley derivatives with a retractable undercarriage and/or turbine power. A wide variety of bespoke solutions were also offered, a succession of Victor(ish) proposals from Handley Page seemed promising and, had they been realised, it might have avoided that company's ultimate demise for political reasons – the same political considerations that eventually led to the RAF acquiring the Avro 748-derived Andover rather than its preferred option, which would have been a version of HP's Herald.

Overall, the reader is left with an impression of endless debate about hold sizes, the nature of the loads to be carried and the range issue with generally less than satisfactory outcomes. Splendid as the Britannia and VC10 were as airliners (even if they were built in only small numbers) they were hardly ideal as military freighters. That is not to say that they did not give sterling service, of course; they did, but those side loading doors ruled out the option of parachute delivery and the necessity for pre-positioned scissor-lifts to hoist freight up to sill height imposed further significant constraints on their utility. The only clean sheet designs to make it into production were the Argosy and the Belfast and dogged attempts to extract value from the latter produced a succession of long thin and short fat derivatives none of which would materialise, and much the same was true of attempts to tailor the VC10 to meet specific requirements.

OR351, along with the AW681 project and the other contenders are discussed at some length but it was all to no avail. The final solutions were the C-130, the C-17 and, after a looong wait, the Atlas, and the technical and political issues surrounding the acquisition of all three are considered.

Transports simply do not have the same allure as combat aircraft, of course, so this book may be less appealing than previous volumes in the series but, be that as it may, transports are an essential tool in the air power box. My reservations about proof-reading aside, this 272-page (the biggest yet) casebound A4 book is just as interesting

and informative as its predecessors. It is also just as lavishly illustrated, on coated paper, with, apart from photographs and sundry graphs and explanatory diagrams, more than 100 three-view drawings of transport aeroplanes, real or imagined – and some of the latter border on the bizarre.

Recommended for all, but especially 'truckies'.

CGJ

The RAF in the Battle of France and the Battle of Britain – A Reappraisal of Army and Air Policy 1938-1940 by Greg Baughen. Fonthill; 2016. £25.00.

Older members of the Society with any propensity to raised blood pressure may chose not to read this book which they may see as a polemical attack on the intelligence, integrity and competence of members of the leadership of the Royal Air Force in the run up to the Second World War and in the Battles of France and Britain. Whilst many would acknowledge the validity – in part – of such views, by the end of this comprehensively researched book, one is left with the suspicion that the case has been over-egged and that sources and facts have been used to play to a familiar and rather tired agenda.

The 272-page book, with its 72 B&W plates, is arranged chronologically in 14 chapters, with a staggering 784 endnotes drawing largely, in the earlier chapters, on primary sources from the National Archives. These are arithmetically impressive but essentially opaque to the reader, leaving many question marks over what exactly lies behind them.

The tour d'horizon with which the book begins takes a predictable and, perhaps, understandable swipe at the bomber theology of the day and is lukewarm about the Dowding System. The title of the first chapter, *Armies, Air Defence or Bombers*, is an accurate statement of (some of) the competing priorities facing the Air Ministry in 1938. The author's conclusions are developed in subsequent chapters into fierce criticism of the perceived sins and omissions of the Air Staff and, notably, of the two Commanders-in-Chief, Portal and Dowding.

Failure upon failure, compounded by wilful adherence to theories of strategic bombing – all these are enumerated and sometimes presented with what might patronisingly be viewed as a layman's understanding of the realities of aircraft procurement, performance

and limitations. Equally, for all that the Air Staff may stand accused of failure to respond to the lessons of the Spanish Civil War, timescales, resources and priorities are rather glossed over in Baughen's account. What are especially interesting are his assertions about aircraft types suited to close support of the BEF in 1940 and his conclusions which favour slower and more agile aircraft than the front-line fighters of the day. The rather hostile tone of much that follows is perhaps encapsulated in his verdict that in Norway, the RAF's involvement was '*based on the minimum the Air Ministry could get away with."*

As the book progresses, criticism of Air Ministry Policy becomes ever more strident. '*The heavy losses in tactical operations [in France] were gratefully accepted [by the Air Staff] as proof that Army air support did not work*.' Maybe so, but the harshest criticism of the RAF at the time of the Battle of France is reserved for the concurrent 'strategic' bombing of oil targets in Germany, ineffectual though it was, and for the failure of Fighter Command to put into the shop window the many hundreds of fighters 'idle' in Britain. Where equipment for Army support is concerned, the author is sparing in his praise of some more successful designs, but expresses degrees of warmth towards such unlikely types as the Battle, Henley, Buffalo, Mohawk and Gladiator, reflecting a War Office view that '*something more like the Ju 87 Stuka*' was what was needed.

The author's most savage criticism, sometimes sarcastically and often naïvely expressed, is reserved for Air Chf Mshl Dowding: '*As far as Dowding was concerned, the sooner the allies armies in France were defeated, the better it would be. It was the tunnel vision of a commander who could not see beyond his assigned mission of defending British airspace.'* He is critical of the Dowding System, of the CinC's deployments and of their actual and potential consequences and, predictably, of his failures to sort out the tussles between the AOCs of 11 and 12 Groups. He takes a very partisan view of the 'failure' to make better use of 'battle hardened' pilots from Poland and Czechoslovakia. Dowding, he suggests, '*continued to spread gloom*' and '*As always, he was happy to put the worst possible spin on the facts*.' His verdict, that '*It was the restrictive air defence system and the equipment, tactics and training that came with it, that had been such a disadvantage in fighting these battles[for air superiority by day]',* is a perfect illustration of the gap between Mr Baughen's view

of the Battle of Britain and that of less revisionist historians.

Greg Baughen has expressed his views rather more moderately elsewhere and in terms more sympathetic to the contemporary leaderships of both the Army and Royal Air Force, showing understanding of the real pressures under which they operated. Sadly that is not the case in this book which tends to portray the Air Ministry, the Air Staff and, especially, Sir Charles Portal and Sir Hugh Dowding in black and white as knaves or fools. As is often the case in reappraisals written long after the event, the author leaves himself vulnerable to the cheap charge, that had only he been at the helm in those critical days of 1938-1940, more sensible decisions would have been taken and better results achieved. Greg Baughen has written on Facebook of '*progress being made towards my goal of rewriting the history of British air power from 1900 to the present day*.' On the evidence of this present volume, there may be trouble ahead.

AVM Sandy Hunter

Flight Badges of the Allied Nations 1914-1918, Volume II by Commander Robert S Pandis. Published by Pandis in 2016 (ISBN: 978-1-5323-0573-3). $95.00.

There is a tendency, often justified, to be sceptical, about works by authors who write on wars which took place thousands of miles from their home country, and long before they were born. But this book is an exception; written by a former USNR officer who flew A-6s, it is a masterpiece.

The title, *Flight Badges of the Allied Nations 1914-1918, Volume II*, might cause some members to skip over it on the bookshop shelves, and quickly move on to books on less narrowly-focused subjects. 'Badges' *per se* may not fall within everyone's immediate sphere of interest, but, if you see a copy, I would urge you to pick it up and have a good look. It is a quite remarkable work which has been painstakingly put together using material from many primary sources.

The book is lavishly produced. It runs to some 480 pages of gloss paper and is heavily illustrated; some black and white contemporary photographs and reproductions of documents aside, there are several thousand high-definition images of badges, all of them in colour. The first 190 pages deal with the RFC, the RNAS, the RAF and the Australian and Canadian air services. No other book has ever

examined so thoroughly the various patterns of flying badges worn by these Services during the First World War, or probed so deeply into the background. The next 292 pages provide a similar analysis of the American Air Services, Belgian Military Aviation, the Imperial Japanese Air Services, Italian Military Aviation Corps, and the Serbian Air Service.

But, this is more than just a catalogue of 'wings'. The author has included insights into the sometimes less-than-perfect staff work which led to the eventual introduction of insignia to distinguish aviators from those whose duties did not require them to risk life and limb in the crude flying machines used in the Great War. Existing official archives are woefully incomplete and Pandis has made considerable effort to produce a comprehensive and coherent history, based on inputs from many, sometimes unexpected, sources. Having had an interest in the subject for fifty years, I have seen several authors attempt similar tasks, but none have come close to producing a book of this quality.

For those less interested in badges, the book still provides fascinating glimpses into the activities of several fledgling air forces, their training procedures, and their struggle for recognition in countries where military dogma still favoured horses over unproven flying machines. Thus, it contains background which will make it attractive to anyone with an interest in Great War aviation, and a 'must' for those with a passion for military aviation uniforms and insignia.

The production quality of this very weighty book has, inevitably, had an impact on the price. But, as the definitive work on the subject, this scholarly tome has been a labour of love for the author, and the profit margin, if any, will be minimal. For aficionados of badges who are not already aware, in addition to the earlier, and slightly slimmer, *Flight Badges of the Allied Nations 1914-1918, Volume 1* (covering the French, Russian, and Romanian Air Services), Pandis has available two companion books dealing with the opposition: *Imperial German Flight Badges, Volume II – German Navy and Central Powers Air Services* (covering those of Austria-Hungary, Ottoman Turkey and Bulgaria) and a much-enlarged second edition of Vol I, now re-titled *Flight Badges of the Central Powers 1914-1918, Volume I – The Imperial German Army Aviation and Commemorative Airship*

Badges.

Copies can occasionally be found in specialist bookshops in the UK, but all are available from Amazon or direct from the author at A6jock@yahoo.com.

Gp Capt Chris Morris

Clipped Wings (Vol 2) by Colin Cummings and Bill Walker. Nimbus Publishing (October House, Yelvertoft, NN6 6LF); 2016. £25.

A surprising number of books fail to appear on the date announced in advance and this one conformed to that convention as it was expected to be 'out in time for Christmas'. It was only a few weeks late, however, and for devotees of this series, it will have been well worth the wait. Since *Clipped Wings (Vol 1)*, which dealt with pre-operational training aircraft losses in the UK, Rhodesia, India and various minor territories between 1939 and 1942, was reviewed only recently, readers are referred to Journal 64 (page 152) for an overview. Suffice to say that the presentation of information in Vol 2 mirrors the format of its predecessor, with one notable exception. Whereas the structure of Vol 1 was wholly chronological, Vol 2 is sub-divided by territory. That is to say that, while they are recorded in sequence, accidents that occurred in Australia, Canada, South Africa, New Zealand and the USA are presented separately, again over the period 1939-42. Beyond that, however, you get the customary Cummings-style accident dataset, comprising: the date and location of the incident; the type of aircraft involved, identified by serial number and unit; and details (generally full name, rank, age and Service if not RAF) of fatalities, all of this being amplified by a brief description of what happened. That said, there are some deviations, largely arising from 'colonial' record-keeping; for instance, SAAF sources provide only initials, rather than given names.

The data is preceded by some useful notes on: the organisation of wartime flying training; the causes of flying accidents; damage, repair and maintenance categories; and the sourcing of records. As with Vol 1 Cummings credits himself as 'compiler and editor', rather than author, and warmly acknowledges the generous assistance he has received from collaborators in Australia, New Zealand and, especially, Canada. In fact, he is so indebted to his Canadian colleague that he has given him equal billing.

Vols 3 and 4 are still in the mill but they will eventually repeat the pattern set by Vols 1 and 2, but covering 1943-45. I cannot really improve on my closing remarks from Journal 64. 'Books of this nature may be a niche market but for those of us who lurk in this niche, this series of books is an invaluable resource. Furthermore, a proportion of the proceeds goes to charity.'

CGJ

Looking Down on War – Intelligence Images from the Eastern Front by Colonel Roy M Stanley II, USAF (Retd). Pen & Sword; 2016. £30.

Having flown strategic reconnaissance with No 543 Sqn, at Wyton, tactical reconnaissance with No 13 Sqn from Malta and Cyprus, and having conducted strategic analysis, in the United Kingdom, and tactical analysis in Germany and Malta, I have an abiding interest in imagery-derived intelligence. So, I looked forward to reading Roy Stanley's latest offering about photographic interpretation, using imagery that had been acquired by German forces, and captured by the Allies at the end of the Second World War. In his previous (2013) book in the Pen & Sword series, *The Normandy Invasion, June 1944: Looking Down on War*, he gave an excellent account of the use of photographic reconnaissance at that juncture, and made good use of ground photography to illustrate equipment and defences. But in this latest offering he selects the broader subject of the German invasion of the Soviet Union, and in part he uses imagery that was acquired by the *Luftwaffe* and was captured by American forces at the end of the war. Because of the breadth, depth and duration of the invasion, the captured air photography is sparse and random and is supplemented with images which have little relevance or merit. An entire page is devoted to a 'Page Three Girl', with speculative commentary on how the photograph came to be among post-war intelligence files. Most of the book comprises photographs and sketches drawn from numerous Axis and Allied sources, with no more than footnotes and captions. After such fine use of materials in the book on the invasion of Normandy, this 349-page hardback about the Axis invasion of the Soviet Union is disappointing.

Gp Capt Phil Rodgers

ROYAL AIR FORCE HISTORICAL SOCIETY

The Royal Air Force has been in existence for more than ninety years; the study of its history is deepening, and continues to be the subject of published works of consequence. Fresh attention is being given to the strategic assumptions under which military air power was first created and which largely determined policy and operations in both World Wars, the interwar period, and in the era of Cold War tension. Material dealing with post-war history is now becoming available under the 30-year rule. These studies are important to academic historians and to the present and future members of the RAF.

The RAF Historical Society was formed in 1986 to provide a focus for interest in the history of the RAF. It does so by providing a setting for lectures and seminars in which those interested in the history of the Service have the opportunity to meet those who participated in the evolution and implementation of policy. The Society believes that these events make an important contribution to the permanent record.

The Society normally holds three lectures or seminars a year in London, with occasional events in other parts of the country. Transcripts of lectures and seminars are published in the Journal of the RAF Historical Society, which is distributed free of charge to members. Individual membership is open to all with an interest in RAF history, whether or not they were in the Service. Although the Society has the approval of the Air Force Board, it is entirely self-financing.

Membership of the Society costs £18 per annum and further details may be obtained from the Membership Secretary, Wg Cdr Colin Cummings, October House, Yelvertoft, NN6 6LF. Tel: 01788 822124.

THE TWO AIR FORCES AWARD

In 1996 the Royal Air Force Historical Society established, in collaboration with its American sister organisation, the Air Force Historical Foundation, the *Two Air Forces Award*, which was to be presented annually on each side of the Atlantic in recognition of outstanding academic work by a serving officer or airman. The British winners have been:

1996	Sqn Ldr P C Emmett PhD MSc BSc CEng MIEE
1997	Wg Cdr M P Brzezicki MPhil MIL
1998	Wg Cdr P J Daybell MBE MA BA
1999	Sqn Ldr S P Harpum MSc BSc MILT
2000	Sqn Ldr A W Riches MA
2001	Sqn Ldr C H Goss MA
2002	Sqn Ldr S I Richards BSc
2003	Wg Cdr T M Webster MB BS MRCGP MRAeS
2004	Sqn Ldr S Gardner MA MPhil
2005	Wg Cdr S D Ellard MSc BSc CEng MRAeS MBCS
2007	Wg Cdr H Smyth DFC
2008	Wg Cdr B J Hunt MSc MBIFM MinstAM
2009	Gp Capt A J Byford MA MA
2010	Lt Col A M Roe YORKS
2011	Wg Cdr S J Chappell BSc
2012	Wg Cdr N A Tucker-Lowe DSO MA MCMI
2013	Sqn Ldr J S Doyle MA BA
2014	Gp Capt M R Johnson BSc MA MBA
2015	Wg Cdr P M Rait

THE AIR LEAGUE GOLD MEDAL

On 11 February 1998 the Air League presented the Royal Air Force Historical Society with a Gold Medal in recognition of the Society's achievements in recording aspects of the evolution of British air power and thus realising one of the aims of the League. The Executive Committee decided that the medal should be awarded periodically to a nominal holder (it actually resides at the Royal Air Force Club, where it is on display) who was to be an individual who had made a particularly significant contribution to the conduct of the Society's affairs. Holders to date have been:

Air Marshal Sir Frederick Sowrey KCB CBE AFC
Air Commodore H A Probert MBE MA
Wing Commander C G Jefford MBE BA

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