

**COUNCIL OF MILITARY EDUCATION COMMITTEES
OF THE UNITED KINGDOM UNIVERSITIES**



**THE UNIVERSITY AIR SQUADRONS
EARLY YEARS 1920–39**

By Clive Richards

COMEC OCCASIONAL PAPER. No 7.

Series Editor

Dr Patrick Mileham

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**FOREWORD BY
PROFESSOR DICK CLEMENTS
CHAIRMAN COMEC**

It gives me great satisfaction to introduce this, the latest in COMEC's series of Occasional Papers. I have been involved with the University Air Squadron world, both at my own University, Bristol, and elsewhere, for many years. I am keenly aware of the benefits which the Air Squadrons bring to their student members, whether destined ultimately for an RAF career or not. Despite this my knowledge of the origins of these valuable institutions was vague.

Clive Richards has researched and written a fascinating history of the University Air Squadrons from their beginnings between the two World Wars. It is a rather convoluted story, involving the Government, universities, aeronautical research and industry. Were the inter-war University Air Squadrons serious military aviation units, or flying clubs for a few high spirited Oxford, Cambridge and London University undergraduates? While Germany was re-arming the future of air power was becoming very clear. What could the RAF do to engage the best brains from the universities? In this Occasional Paper the author covers the period of UAS history up to the outbreak of World War II. His intention is, in due course, to continue the story into the post WWII period. In the meantime he has included, in this volume, an appendix previewing the UAS lineage up to the present.

*With Clive's agreement, the series editor has also included extracts from the best-selling book *The Last Enemy* by Richard Hillary. These give valuable insights into some of the undergraduates' and young pilots' attitudes to the UAS and RAF at the time, so very different from that of the authorities. The contribution of these young men was undoubted. As shown in another appendix, ninety-seven former UAS members served in the Battle of Britain, during which many died, and others served in the air later in World War II and into the Cold War. University Air Squadron members should read Hillary's story and be inspired by the example of such true UAS heroes.*

We are very grateful to Clive Richards for his very considerable researches for 'the beginnings' and look forward to future work extending the story.

Dick Clements
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THE UNIVERSITY AIR SQUADRONS. EARLY YEARS 1920–1939

By

Clive Richards

Publicly-funded flying clubs?

‘Now, perhaps, some troublesome economist may ask why public money is expended on what might be described as a flying club?’ *Flight* correspondent Major F A de V Robertson noted in 1928.¹ His subject was Cambridge University Air Squadron (UAS) – one of two then in existence. The primary aim of this paper is to examine the evolution of these pioneering units up to the outbreak of war in 1939. In doing so, it will endeavour to address two broad issues. Firstly, why were the University Air Squadrons formed and what functions were they intended to fulfil? Secondly, how did their aims, activities and organisation develop during the interwar period?

British universities and aeronautical research

Academia did not figure greatly in the early development of aviation in the UK. Early British aeronautical pioneers such as Cody, Maxim and Dunne tended to eschew theoretical research in favour of practical experimentation. ‘Numbers of inventors had come to see me as the then responsible Minister, including the brothers Wright,’ Richard Haldane – who served as the Secretary of State for War between 1905 and 1912 – later reflected in his *Autobiography*, ‘and I examined many plans and specifications’. However, ‘those whom I interviewed’ Haldane continued ‘were only clever empiricists, and that we were at a profound disadvantage compared with the Germans, who were building up the structure of the Air Service on a foundation of science.’²

More recent accounts of the early development of British aeronautics have questioned the validity of Haldane’s comparison of the work conducted in the UK and Germany. ‘It is difficult not to feel’, argued Hugh Driver, ‘that Haldane’s profound enthusiasm for Teutonic metaphysics cast rather an artificial glow over his view of German arms’.³ Nevertheless, it is clear that Haldane ‘had no faith in ‘uneducated’

empiricists and wanted to re-establish military aeronautics on an academic basis'.⁴ In order to do so, Haldane set in train a series of events that would lead to the reconstitution of the British Army's existing Balloon Factory as a civilian research establishment – designated the Royal Aircraft Factory on the creation of the Royal Flying Corps in April 1912; and subsequently the Royal Aircraft Establishment (RAE) on the formation of the Royal Air Force in April 1918.

Beyond the War Office, tentative steps were also being taken by the University of London to further the academic investigation of manned flight. Much of this was due to the efforts of Albert Thurston. Indeed, an obituary published in *The Times* following his death in 1964 hailed Thurston as having 'single-handedly, inaugurated aeronautical education in this country'.⁵ Thurston, a graduate of the then East London College, was the chief aeronautical assistant to Sir Hiram Maxim between 1903 and 1910. In June 1909 the aviation journal *Flight* reported that he was to deliver 'Three lectures on aeronautics' at his former college, which in May 1907 had become 'the fourth School of the University [of London] in engineering'.⁶ Thurston presented another 'course of lectures on aeronautics' at East London College later in the same year, sponsored by aviation benefactor Patrick Alexander.⁷ An 'Aerodynamical [sic] Laboratory...for experimental research' was established in the basement of the college's theatre, again supported financially by Alexander, and by 1911 the college was inviting applications from 'a few gentlemen desirous of experimenting'.⁸ In March 1913, Thurston was awarded a DSc from the University of London, thereby becoming the first Briton to be awarded a doctorate for work conducted in aviation. His thesis was entitled 'Experimental Researches in Aeronautics'.⁹

Aeronautical research in the UK accelerated greatly following the outbreak of the First World War. One effect of this acceleration was to bring researchers from other institutions and disciplines into the aviation field. In November 1914 an Experimental Flight was formed at the Central Flying School, Upavon, under the command of Captain A H L Soames, 'to devise methods of mounting guns on aeroplanes, to develop visual signalling and to devise bomb-dropping gear and sights'.¹⁰ Soames was assisted by two Oxford academics; meteorologist Gordon Dobson, and chemist Robert Bourdillon. Bourdillon in turn recruited Henry Tizard, a

fellow chemist, formerly of Oriel College then serving in the Royal Garrison Artillery. They were joined subsequently by three more peacetime Oxford academics, Idwel Griffith, Robert Lattey and Humphrey Raikes.¹¹

Two members of the University of Cambridge were also engaged in aeronautical research. The first was Keith Lucas, a fellow of Trinity College who ‘had already acquired a world-wide reputation as one of the most promising physiologists of the younger generation’. He was killed in a mid-air collision in October 1916 whilst serving with the Royal Aircraft Factory. The other was Bertram Hopkinson, Professor of Applied Mechanics and Professorial Fellow at King’s College, Cambridge, who at the time of his death in a flying accident on 26 August 1918 was the Deputy Controller, Technical Department at the Air Ministry.¹²

The Air Ministry and the Universities

The immediate aftermath of the First World War witnessed the rapid demobilization of the UK’s armed forces. The RAF was far from immune from this process. Between the Armistice and 1 April 1919 the personnel strength of the new Service shrank by 190,000, from 293,000 to 103,000, and by 1 April 1920 it stood at just 27,000 – less than 10 per cent of the total as at 11 November 1918.¹³ However, this did not bring a concomitant reduction in the responsibilities of the Air Ministry, but rather the reverse; for while the remit of the wartime ministry had been confined to the administration of the Royal Air Force, peace would see it widened to encompass two new roles.

Firstly, by stipulating that ‘The purposes of the Air Council shall include all matters connected with aerial navigation’, Section 2 of the Aerial Navigation Act, 1919 made the new department responsible for the supervision of every aspect of UK aviation – civilian as well as military – and its associated activities, such as the Meteorological Office.¹⁴ Secondly, the demise of the Ministry of Munitions led to the transfer of the aircraft development, inspection and supply functions to the Air Ministry on 1 January 1920.¹⁵ The Air Ministry’s military and civilian responsibilities would demand that it remained abreast of new developments in aviation. ‘Steady and uninterrupted progress in research’, Trenchard acknowledged

in his 1919 memorandum *Permanent Organization of the Royal Air Force*, 'is vital to the efficiency of the Air Force, and to the development of aviation generally, and on it depends both the elimination of accidents and the retention of the leading position we have established at such heavy cost during the war'.¹⁶

In order to do so, the Ministry would need to work with the UK academic community. Just such a requirement had been predicted by a memorandum written by Bertram Hopkinson in the month before his death. In this he had emphasised two requirements that were fundamental to any future aeronautical training and research programme; 'the need of the best general scientific education of those who are engaged in the development of aeronautics'; and the ability to supplement the former with 'practical flying experience'. One UK institution, Hopkinson went on to argue, was best equipped to furnish both – the University of Cambridge. 'Before the War', he wrote, 'it held a position of acknowledged supremacy as a centre of scientific teaching and investigation – on the more practical side its Engineering School was nearly the largest in the country'. He continued

'The traditions and spirit of the place combined with the provision of College Scholarships, attract to it a very large proportion of the boys of Public Schools having a bent in the direction of science or mathematics. The effect of this, together with the residential College system, which brings all these people into such close association, was to make it the most "live" centre of scientific thought in the country, and perhaps anywhere'.

The flat terrain around Cambridge made it possible to establish 'a flying ground within a few minutes' walk of the laboratories and lecture-rooms', and there existed 'three large training centres all within 15 miles of Cambridge. And finally it may be added that the University has always attracted and will continue to attract the type of boy who naturally takes to flying'. Hopkinson concluded by recommending that 'it should be part of the policy of the Air Ministry to encourage the development of Cambridge after the war as the national centre of aeronautical teaching and research'. He added,

‘It is a natural consequence of the establishment of the training centres at Duxford and Fowlmere that pilots and others under training should look to the University for such scientific and technical training as they require.

I suggest that this should be envisaged as a definite policy, that it should be developed on the lines of the establishment of more training centres in the neighbourhood, and in particular that one such centre should be placed as near to Cambridge as possible. This last could, after the war, be the University flying ground – the place for research and for the teaching of students of the scientific and engineering side of aeronautics’.¹⁷

Although Hopkinson’s memorandum was forwarded to Lord Weir (then Secretary of State for the Royal Air Force) shortly after it was written, no action was taken.¹⁸ However, the Vice Chancellor of Cambridge, Dr Arthur Shipley, returned to the charge on 26 January 1919. In a letter to the Under Secretary of State for the Royal Air Force, J E B Seely (later Lord Mottistone), Shipley noted that in the intervening period ‘A private benefactor has expressed his willingness to endow a Chair of Aeronautical Engineering, as a memorial to his eldest son, who was killed in action in France whilst flying’. This offer came with two conditions:

(1) that the University will provide the necessary accommodation and equipment for class and laboratory work and (2) that the Government will on their part place at the disposal of the University a suitable aerodrome in the neighbourhood of Cambridge together with the matériel necessary for experiment and research.¹⁹

Seely was immediately receptive to the proposal, noting in a memo to the Deputy Chief of the Air Staff, Oliver Swann (formerly Royal Naval Air Service and later Air Vice Marshal) dated 28 January that ‘I am clear that it will be in the interests of the RAF to do this, and thus secure the manifold advantages which research at Cambridge can give us’.²⁰ After some discussion, it was decided that flying facilities should be made available to the university at nearby RAF Duxford. On 26 September 1919 Bennett Melville Jones, a Junior Fellow and Director of Engineering Studies at Emmanuel College, was elected to the Francis Mond Professorship of Aeronautical

Engineering.²¹ Subsequently, on 30 April 1920 the Air Officer Commanding, Inland Area was informed formally by the Air Ministry that the establishment of No 2 Flying Training School at Duxford would be revised to include 'a special flight whose primary duty will be to carry out work for the Professor of Aeronautical Science, Cambridge University'.²²

Officer recruitment

However, Air Ministry interest in UK universities went beyond aeronautical research. It was clear to the Air Staff from the outset that the new Service would need to recruit a proportion of its peacetime officers from the universities. For example, in a handwritten addition to a minute, dated May 1919, sent to the Chief of the Air Staff (the then Major General Sir Hugh Trenchard) with regard to the establishment of the Mond Professorship at Cambridge, the Director of Training and Organisation (DTO), Brigadier General Philip Game, noted that 'We shall have to get in touch with the Universities before long as regards University Candidates for the RAF'.²³ In his 1919 *Memorandum*, Trenchard noted that 'Owing to the necessity of a large number of officers in the junior ranks and the comparative paucity of higher appointments' it would not be 'possible to offer a career at all'; and that as a result 'some 50 per cent only of the officers have been granted permanent commissions, the remainder being obtained on short service commissions or by the seconding of officers from the Army and Navy'. Although Trenchard envisaged that the new RAF Cadet College would 'be the main channel' by which those offered permanent commissions would enter the Service, candidates would also be drawn 'from the Universities and from the ranks'.²⁴

Following consultation with the relevant university authorities, in December 1920 the Air Ministry advised twenty UK universities that 'the regulations under which a small proportion of the permanently commissioned officers of the Royal Air Force will be obtained by direct nomination from the Universities of the British Empire have now been approved' and 'that 10 permanent commissions in the Royal Air Force will be reserved for University Candidates in the summer of 1921'.²⁵ These regulations stipulated that 'The privilege of recommending Candidates for nomination to permanent commissions in the Royal Air Force' was 'open to the

Governing Body of any recognised University of the British Empire'. Any of the latter that wished 'to be empowered to recommend candidates to *permanent commissions*' being requested to apply to the Secretary (DTO), Air Ministry...for inclusion on the list of Universities recognised for this purpose by the Air Council'.²⁶

The Air Ministry's efforts would appear to have met with only limited success. A 'List of University Candidates who have been granted permanent commissions in the RAF under the University Scheme' indicates that only twenty-three graduates had been so commissioned prior to 1 April 1926 – one in 1921, five in 1922, none in 1923, four in 1924, eleven in 1925 and two in 1926.²⁷ This would appear to have been due, at least in part, to the fact that undergraduates were often unaware of the opportunities that were available. For example, in a letter dated 17 March 1924 to Professor Charles Inglis – then head of Cambridge's Engineering Department – the Deputy Director of Personnel, Group Captain Philip Joubert de la Ferte, bemoaned the fact that he had been approached by a young man who 'did not know there was any University scheme of entry into the RAF'.

'After my impassioned appeal to the engineering students last term I feel most sorrowful that the information has not spread sufficiently far to have reached this gentleman. Do you think you could do some more to help me in this matter? It is clear that the tutors, except those whom I have personally met, do not interest themselves in this matter, and I wonder whether further visits might have the desired effect'.²⁸

In order to increase the profile of the RAF within higher education, attention turned to the prospect of utilising the existing Officer Training Corps units. During a visit to Oxford University at the beginning of November 1923, Joubert de la Ferte met with the Officer Commanding Oxford OTC (Lieutenant Colonel Alan Dawnay) and several of the university's military members. In a minute to the Director of Training and the head of secretariat S7 dated 2 November, Joubert subsequently reported 'that there is very little interest taken in Military matters at the University, but that this is likely to improve'. He also noted the existence of 'a definite order at the University against Undergraduates flying as pilots'; should the Air Ministry 'establish a flying section of the OTC, very careful arrangements will have to be

made to avoid clashing with the University Authorities'. In light of this, Dawnay had suggested to Joubert:

- (a) That a Ground Training Section should be established in conjunction with the OTC and that for the first year it should be in charge of an RAF officer who had been at Oxford University as an Undergraduate (he was most emphatic on this point).
- (b) He thought it very necessary that at least once a week an aeroplane or aeroplanes should go over from the nearest RAF Unit to Port Meadow for demonstration purposes and to enable the Undergraduates to fly as passengers (apparently the University authorities do not object to this).²⁹

Planning for the establishment of a Royal Air Force component to the existing OTC system was undertaken by the Air Staff's Directorate of Organisation and Staff Duties (DOSD). On 6 September 1924, these plans were forwarded by the officer then serving as SD3 within the DOSD's Deputy Directorate of Staff Duties (DDSD) – Squadron Leader Trafford Leigh-Mallory – to the Vice-Chancellor of Oxford for comment. 'The object of this scheme' Leigh-Mallory noted in his covering letter, 'is to disseminate information concerning the nature of the work which is done by the RAF, its organization and responsibility, amongst members of the Universities. As a result of this it is hoped to stimulate interest in the RAF, to obtain a steady flow of candidates for commissions from the Universities, and to help build up a suitable reserve of Pilots'.³⁰ The scheme called for the establishment of 'Air Platoons' within selected school OTCs and 'University Squadrons' at Oxford and Cambridge, along lines similar to the existing military units.

A change of approach

Dawnay signalled the Hebdomadal Council's approval in principal for the Air Ministry proposals on 24 January 1925– with the proviso that 'members of the Royal Air Force Unit of the Officers Training Corps be strictly prohibited from flying during the University terms'.³¹ However, in the intervening period the Air Ministry's approach had undergone something of a sea-change. Whilst recognising its practical value, Trenchard remained uneasy with regard to the proposed integration

of the new RAF units within the existing school and university OTC structure. An alternative suggestion came not from a member of the Air Staff, but rather from one of the Air Ministry's political leaders.

On 4 November 1924 Sir Samuel Hoare had been appointed Secretary of State for Air in succession to Lord Thomson.³² Following his appointment, Hoare selected for the post of parliamentary private secretary Sir Geoffrey Butler, then 'MP for Cambridge University, Fellow of Corpus Christi College, historian, Conservative Party intellectual and, not least, an air enthusiast'.³³ Hoare saw Butler as someone who could help smooth the path for the introduction of the new air unit at Cambridge; 'His vivid personality, genius for friendship and great influence on the University', Hoare later recalled, 'combined to make him the very man I needed for winning support for what was at the time a very new experiment'.³⁴

Following a discussion on 10 December 1924 with Butler and the Director of Organisation and Staff Duties (Air Vice-Marshal Sir Ivo Vesey), in a minute written on the following day Trenchard urged Vesey to 'ask Sir Geoffrey Butler to help in any way he can'.

'I feel that the views I expressed to you and Sir Geoffrey yesterday, that we should start clear of the OTC, are impracticable at the present moment, though I still believe in them. The scheme as far as it has gone should in any case be capable of success if we have the right type of officers at the different places, and it all depends simply on that'.³⁵

Trenchard summarised the state of play with regard to the Air Ministry's proposals in a minute to Hoare dated 6 January 1925. Hoare also took the opportunity to discuss the issue with Butler directly over lunch. On 9 January, Hoare professed himself 'much impressed by the views expressed' by Butler and 'disinclined to proceed with an arrangement that will tack us on to the OTC'. He invited Butler to comment further on the proposals as they now stood, and Butler duly prepared a memorandum for Hoare on the subject.³⁶ Hoare later recalled the guidance that he had received from Butler.

'Keep entirely clear of the OTC methods. They are out of date and not suitable for a new chapter in a plan for the new world. By all means call the university units squadrons, but make them from the first non-military. In this way you will forestall university criticism and opposition, and if you make them live centres for instructing picked young men in aviation matters, their potential value to the Air Force will be just as great as if they were military units, and last but not least, you will have the additional advantage of the general support of the University authorities'.³⁷

Hoare forwarded Butler's memorandum to Trenchard on 14 January 1925. The Chief of the Air Staff found it 'an extraordinarily interesting document' that encapsulated 'what I felt at the back of my mind the whole time'.

'Though by the pressure of circumstances we have advanced along other lines in order to get something going, I feel, even though it means restarting entirely and throwing into the waste paper basket all the work up to now, that we should review this question thoroughly again. We cannot afford to start on the wrong lines, I would rather go slow, slower than I have gone for the last 5 or 6 years, than make a mistake'.³⁸

Butler had recommended that a small committee be formed to examine the question further, and on 19 January Hoare wrote to Butler to advise him that he had decided to act on this recommendation and to invite Butler to serve as its chair. 'I am inclined in the first instance', Hoare continued, 'to let Oxford wait, and confine our immediate action to Cambridge, where I can count on such a Committee bearing early fruit through your good office'.³⁹

By the spring of 1925, discussions between the Air Ministry and Cambridge had progressed to such a degree that the former felt ready to notify the Treasury of their proposed change in direction. 'In the course of discussion with the Cambridge University Authorities', Principal Assistant Secretary H W W McAnally wrote on 15 April,

‘It has become apparent to the [Air] Council that it will so far as this University is concerned be necessary to depart from the scheme originally proposed and that instead of forming an Air Unit as part of the Cambridge University Officers’ Training Corps, it should be a separate unit which in certain respects only would work in liaison with the Officers’ Training Corps. The Council and the University authorities who have been consulted feel convinced that such an arrangement would give promise of greater success by allowing freer scope for the introduction of technical courses for undergraduates and senior members of the University who are interested in the technical and research side of aviation’.⁴⁰

A further official letter dated 18 July made clear that ‘partly as a result of discussion with the University authorities and partly with a view to enhancing the value of the scheme in relation to the expansion of the Royal Air Force for Home Defence,’ the Air Council had ‘come to the conclusion that it is desirable that the organisation and administration of the proposed units should be entirely distinct from that of the Army OTC Units’.⁴¹ Finally, in a second directed letter, dated 5 August, B E Holloway – one of the Air Ministry’s three Principal Assistant Secretaries – went on to outline the form that the new units would instead take. After very careful consideration’, Holloway noted, the Air Council had ‘decided to abandon the original proposal to form units of a Royal Air Force character, and to proceed with the scheme on non-service lines’.

‘They now propose that the scheme shall take the form of courses and lectures during term, and attachments to Royal Air Force units during vacation.... It is also desirable, should opportunity arise, that members should visit Royal Air Force stations during term, to see the normal routine of the station and, if possible, fly as passengers. All semblance of a service organisation will be avoided, members will not be “cadets” in name or fact, and uniform will not be worn except by the officers.... The Council are anxious, however, that for purely propaganda purposes the term “University Air Squadron”, which was devised by the authorities of the Universities, should be used in connection with the courses’.

With regard to the staff of these units, 'It is intended', Holloway continued, 'that instruction shall be given by regular personnel...who are to be designated "Instructors" and not Commanding Officers, Adjutants, etc'.

'It is also proposed to utilize the services of some of the senior members of the Universities who have or who may acquire knowledge and experience of flying, and it may be necessary to grant to some of these commissions in the Special Reserve or Auxiliary Air Force; but as their position in relation to the proposed courses, etc., will also be that of "Instructor" and not Commanding Officer, etc., this will not be inconsistent with the civilian character of the scheme'.⁴²

Developments at Oxford

Although to a degree overshadowed by the developments at Cambridge, discussions had nevertheless also progressed between the Air Ministry and the authorities at Oxford. On 22 May, the Deputy Secretary of the Air Ministry (Sir Sigmund Dannreuther) notified the Treasury of the Air Council's intention 'to place the squadron at Oxford under the control of the Officer Commanding the Army Officers' Training Corps and, as indicated in the preliminary scheme, to appoint as Officer Commanding the Squadron a senior member of the University'. Given that 'the work of organising a unit of this nature requires a wider experience and a more general knowledge of Royal Air Force requirements than would be necessary if the squadron were finally established', approval was sought to appoint a serving squadron leader to act as the Air Squadron's first adjutant, rather than a flight lieutenant as originally proposed.⁴³

In a covering letter of the same date to the Treasury's W R Fraser, the principal in charge of the Estimates Branch (FE) within the Estimates Division (F1) of the Secretary's Department, W G Stevens, further elaborated on the Air Ministry's position. According to Stevens, the outlook of the Air Ministry now differed in one significant respect from that which had been outlined to the Treasury in the previous year. 'The Air Staff', he explained, 'have had a good many conversations with the various University people concerned and have, consequently, felt it

necessary to modify their original plan: we feel that our ultimate aim should be an independent Air Unit, just as the Royal Air Force is independent, but working closely with the Army Officers Training Corps, just as the Royal Air Force works with the Army'. However, although the Air Staff felt that such a unit could be established immediately at Cambridge, the prevailing situation at Oxford demanded a more circumspect approach.

'At Oxford we have to feel our way with great care and we wish to do nothing to upset the Army Officers Training Corps there, who might view with disfavour an independent, even though co-operating, Air Squadron. At Cambridge, however, we have a fairly strong position, not only through the attendance of our regular officers at the Engineering Course, but by reason of the fact that the Officer Commanding of the Officers Training Corps there, Brigadier General Costello, was recently Chief Staff Officer to the Air Officer Commanding in Palestine and thoroughly appreciates the position of an independent Air Unit, which would work closely with him, but in regard to which he would be relieved of responsibility. As he is Chairman of the Board of Military Studies, he has his hands pretty full, and we have reason to believe that he would not be averse to this arrangement'.⁴⁴

The University Air Squadrons, 1925–1939

Treasury approval for the creation of the new units was forthcoming and both were duly established in October 1925. Cambridge University Air Squadron was formed with effect from 1 October, Wing Commander J B Bowen OBE being posted to the unit as Chief Instructor (in effect, commanding officer) and Flight Lieutenant R V Goddard as Instructor (adjutant) on the same date. Oxford University Air Squadron formed on 11 October, with Squadron Leader A.G. Weir assuming the role of Instructor.⁴⁵ However, a serving officer was not appointed Chief Instructor. Rather, in line with Dannreuther's letter to the Treasury 'a senior member of the University' was appointed to this post; the individual in question being Major Humphrey Raikes, 'the Buffs and RAF, Sub-Rector of Exeter College and Signals Officer of the CUOTC', who had served alongside Bourdillon and Tizard at Upavon in 1915.⁴⁶ The precise status of the squadrons was outlined in greater detail by Sir

Samuel Hoare in a memorandum presented to Parliament to accompany the 1926 Air Estimates.

‘Although the term “Air Squadron” has been adopted for convenience of use, no unit organisation has been introduced and all instruction is given individually in the form of courses which are both practical and theoretical. The object of these courses is to influence the flow of candidates for commissions in the RAF, the Air Force Reserve and the Auxiliary Air Force, to stimulate interest in air matters generally at the Universities, and to promote and maintain a liaison with the Universities in technical and research problems affecting aviation. Except in so far as the qualifications of members, independent of their connection with the “Air squadrons” [sic], render them eligible and willing to enrol in one or other of the non-regular Forces, they will have no liability for Air Force service’.⁴⁷

By 1928 both squadrons had expanded again to 75 members and were well established. In that year *Flight* correspondent Major F A de V Robertson visited Cambridge UAS during their annual camp at RAF Old Sarum – and in the resulting article described the training conducted at Cambridge in the following terms:

‘...there is a ground-training centre at Fen causeway, near the engineering laboratories. There instruction is given in aircraft, engines, wireless, photography, navigation, armament, and instruments. A small wind tunnel is installed, and there is also a research laboratory. In this matter the squadron is giving active help to the University, for the Chair of Aeronautics is not equipped with a laboratory, and Professor Melville Jones uses that of the squadron of which he is an honorary member. A lecture room is also provided, which is fitted up as a reading room and aeronautical library, and members can get light refreshments there. Outside authorities give lectures there usually once a fortnight, and members are expected to attend these.

Flying training is carried out at Duxford, about nine miles away, on four afternoons a week during term time. The usual attendance of members is about 10 a day. During term time, no member of the University who is

in statu pupillari is allowed to fly solo unless he is a qualified pilot. Quite a number of members have, however, earned their “tickets”, and one, at least, is the owner of a DH 53'.⁴⁸

In addition to the squadrons at Oxford and Cambridge the Air Ministry had also planned to establish a University Air Squadron to take advantage of the longstanding academic interest in aeronautical research at the University of London. 'I had made enquiries' Sir Frederick Maurice, Professor of Military Studies, wrote to the DODS (Vesey) in March 1929 'amongst one or two responsible persons in the University as to the creation of a London University Air Squadron and so far the idea has been well received'.⁴⁹ However, financial considerations, combined with concerns as to the way a squadron might work within the university's organisational structure, served to stymie this proposal for some time. 'The Treasury has stipulated', Vesey informed Maurice in his reply dated 19 March,

'that the two Squadrons which already exist at Oxford and Cambridge should be treated as purely experimental and on their trial for the first four or five years of their life and will not admit the principle of their being definitely and finally established until experience shows that they are satisfactory and economical propositions. Until this period has elapsed I am afraid there is no possibility of our obtaining approval to create another squadron of this type'.

However, Vesey did go on to reassure Maurice that 'we shall press strongly for an extension of the scheme to other Universities as soon as the indications show that there is any prospect of success...and we will then certainly bear in mind what you tell us regarding the possibilities in connection with the London University'.⁵⁰ These efforts bore fruit eventually with the formation of a third UAS – the University of London Air Squadron (ULAS) – in September 1935. This new addition echoed the ethos of its predecessors.

However, the non-military status of the university squadrons had come under scrutiny. In a minute to the Chief of the Air Staff dated 19 May 1933, the Director of Organisation and Staff Duties (Air Vice-Marshal R P Mills) outlined a discussion that

he had had with the Under-Secretary of State for Air, Sir Philip Sassoon three days earlier. According to Mills, Sassoon felt 'that the present situation regarding these organisations is most unsatisfactory and that the time had come when the policy regarding them should be thoroughly examined and revised'. He had voiced three 'principal objections' to the UAS as they then operated.

Firstly, Sassoon had pointed out that 'In spite of the fact that these formations are designated "Air Squadron", they bear no resemblance to any Air Force unit, and in character are virtually little more than civil flying clubs'. Secondly, he felt that the designation of the Wing Commander and Flight Lieutenant posted to each squadron as 'Chief Instructor' and 'Instructor' respectively reduced them to a position 'to all intents and purposes little better than the staffs of the various civil flying clubs' and thereby rendered it impossible 'for them to command the authority and maintain the status to which they are entitled and which is essential for the effective fulfilment of their functions'. Finally, Sassoon had complained that 'We provide the undergraduates with the finest machines to fly and personnel to instruct them, and yet practically no credit accrues to the Royal Air Force for doing so'. He continued,

'The manifest attitude of the undergraduate is that the air squadron differs from civil flying clubs only in the material fact that, whereas flying with the university air squadrons is free, in the civil clubs it costs a good deal of money. The present organisation tends to result in a certain lack of discipline and of respect on the part of the members of the squadron for their officers and instructors'.

The answer, according to Sassoon, was 'to give these squadrons a definite service status similar to the OTC – to put the members into uniform and to give them rank. This would impose no greater onus on the members of the squadron other than conforming to a reasonable standard of discipline, which would probably be appreciated by the majority of the members, and the small additional cost of purchasing uniform'.⁵¹

On being consulted by Mills, the Chief Instructors of both Oxford and Cambridge (Wing Commanders K R Park and R P Don respectively) both objected strenuously to any move to further 'militarise' their squadrons, on the grounds that it would meet with the disfavour of the university authorities, be detrimental to recruitment, infringe on the existing training syllabus and would 'not produce a higher degree of efficiency either on the ground or in the air'.⁵² Faced with the arguments put forward by Don and Park in favour of the *status quo*, Sassoon relented. However, he did so with considerable reluctance. Whilst acknowledging that he did 'not propose to press any further in this matter', in a minute to Ellington and Mills dated 10 August, Sassoon nevertheless insisted 'that I am right & also that the changes I suggested w[oul]d not in any way entail any of the disadvantages the Chief Instructors envisage – also that they w[oul]d be extremely popular with the squadrons'.⁵³

Subsequently 'special concessions were made to members of the University Air Squadrons in the way of seniority if they subsequently joined the RAF',⁵⁴ and from 1937 members in their third year who were sufficiently proficient could be commissioned in the newly-created RAFVR. Nevertheless, as late as 1939 the Air Estimates continued to state that while one object of the University Air Squadrons was 'influencing the flow of candidates for commissions in the Royal Air Force, the Royal Air Force Volunteer Reserve and the Auxiliary Air Force', the UAS were 'not of a service character, and members as such have no liability for air force service'.⁵⁵

An end – and a beginning

With the outbreak of war in September 1939 all three squadrons were closed down. Although the University Air Squadron scheme would appear to have come to an abrupt end, the value of these 'publicly-funded flying clubs' was demonstrated emphatically by the contribution made by former UAS members to the war effort. During the Battle of Britain, some 97 of the latter formed part of Churchill's 'Few'. Their names are listed below in Appendix A. Of these, twenty-three lost their lives during the course of the battle. Thirty-seven were credited with the destruction of at least one enemy aircraft, while three were credited with five or more aerial

victories.⁵⁶ However, the contribution of pre-war UAS members to the RAF's wartime efforts went beyond the Battle of Britain – and, indeed, Fighter Command. They served with Allied air force units across the globe, flying in a multiplicity of roles. Two – Kenneth Campbell, who had joined Cambridge UAS whilst studying chemistry at Clare College in the late 1930s, and Geoffrey Leonard Cheshire, who had entered Merton College in October 1936 to study law and joined Oxford UAS in the next year – would be awarded the UK's highest award for gallantry in action; the Victoria Cross.

Moreover, the decision to close the UAS in 1939 did not mark their ultimate demise. During 1940 it had become clear 'that there was in the Universities and University Colleges a considerable number of young men who were eager to start their training for aircrew duties during their spare time at the University. In view of the need of the Royal Air Force for high-quality aircrews, and particularly for officers, it was, therefore, decided to revive the University Air Squadrons'.⁵⁷ By August 1941 the three original UAS had been reopened and a further twenty squadrons established with considerable resources. However, following a decline in undergraduate numbers resulting from the decision to suspend all courses for arts students for the duration of the war, five of these squadrons were disbanded in 1943. The wartime UAS – and their pre-war predecessors – would lay the foundations of the future UAS. The UAS lineage follows in Appendix 2.

With these beginnings, there is much more to be told of the University Air Squadrons and their contribution to air power during the Second World War, the Cold War, to date and well into the future.

RICHARD HILLARY



EXTRACTS FROM 'THE LAST ENEMY'

Oxford has been called many names, from 'the city of beautiful nonsense' to 'an organized waste of time'. I had been there two years and was not yet twenty-one when the war broke out. No one could say that we were strictly 'politically minded'. True, one could enter anybody's rooms and within two minutes be engaged in a heated discussion over rowing or the daddy of contemporary poetry, while an impassioned harangue on liberty would be received in embarrassed silence. Perhaps as good a cross section of opinion and sentiment as any at Oxford was to be

found in Trinity, the college where I spent those two years rowing a great deal, flying a little – I was a member of the University Air Squadron – and reading somewhat.

Life as he reports in his best selling 1942 book, The Last Enemy, was full of so much enjoyment and so many people. Famously the Oxford Union had passed a motion in 1933 that 'This House would not in any circumstances fight for King and Country'. While Churchill called the vote 'abject, squalid, shameless' and 'nauseating', it is said that Hitler might have been misled into thinking the British had lost the will to fight. The fact that the vast majority of British people manifestly did fight, and to the end, revealed that as a force of history national will-power is one of those major Tolstoian 'mysterious forces that move humanity'. Hillary continues,

I went up for my first term, determined to row myself into the Government of the Sudan, that country of blacks run by Blues in which my father had spent so many years. Our attitude will doubtless strike the reader as reprehensible and snobbish. Our attitude was essentially English. We knew that war was imminent. There was nothing we could do about it. We were depressed by a sense of its inevitability but we were not patriotic. We hoped that when war came it might be fought with maximum of individuality and a minimum of discipline.

Such was Hillary's attitude and that of many of his undergraduate contemporaries. He writes little about the University Air Squadron, in which he and other members served, his Squadron OC's report revealing sub-standard performance. This was all in sharp contradistinction with their Nazi German contemporaries. In the 1920s and 1930s Germany was the most air-minded nation in the world, yet under treaty obligations it was only supposed to build civilian planes. They managed over those years to train a hard core of military pilots flying in airlines and glider clubs, and by sending officers to other countries, including Russia, for flight training. Hillary continues.

As I was already in the University Air Squadron I should of course join the Royal Air Force. In the first place I shall get paid and have good food. Secondly, I have none of your sentiments about killing, much as I admire them. In a fighter plane, I believe we shall have found a way to return to war as it ought to be, war which is individual

combat between two people, in which one either kills or is killed. It's exciting, it's individual and it's disinterested. I shan't be sitting behind a long-range gun working out how to kill people sixty miles away. I shan't get maimed: either I shall get killed or I shall get a few pleasant putty medals and enjoy being stared at in a nightclub.

It was on one of these organized trips that Frank Waldron and I went to Germany and Hungary shortly before the War. We wrote to the German and Hungarian Governments expressing the hope that we might be allowed to row in their respective countries. They replied that they would be delighted, sent us the times of their regattas and expressed the wish that they might be allowed to pay our expenses. We contrived somehow to arrive in Bad Ems two days before the race. We were to row for General Goëring's Prize Fours, originally the Kaiser's Fours. All five German crews were lying flat on their backs on mattresses, great giants taking deep breaths.

We even arrived late for the start. 'Are you ready?' called the starter. Beside us there was a flurry of oars and all five German crews were several lengths up the river. As we came up to the bridge that was the half-way mark we must have been five lengths behind; but it was at that moment that somebody spat on us. It was a tactical error. Sammy Stockton, who was stroking the boat, took us up the next half of the course as though pursued by all the fiends in hell and we won the race by two fifths of a second. Looking back, this race was really a surprising accurate pointer to the course of the war. General Goëring had to surrender his cup and we took it back with us to England. It was a gold shell case mounted with the German Eagle and disgraced our rooms in Oxford for nearly a year until we could stand it no longer and sent it back through the German Embassy.

From Hillary's book he seems to have done little flying with the Oxford UAS. No doubt others were keener than he. Then came the war.

For some time we reported regularly every fortnight to the Air Centre at Oxford, where we were paid a handsome sum of money and told to stand by. Then we were drafted to an Initial Training Wing. I found myself supplied with a straw bed and command of a platoon. My fellow sergeants were certainly tough: they were

farmers, bank clerks, estate agents, representatives of every class and calling, and just about the nicest bunch of men it has ever been my lot to meet. There could have been few people less fitted to drill them than I, but by a system of majority vote, we overcame most of our difficulties. If ignorant of on what foot to give a command, I would have a stand-easy and take a show of hands. The idea worked admirably and whenever an officer appeared our platoon was a model of efficiency. We never saw an aeroplane and seldom attended a lecture. Soon afterwards I was commissioned on the score of my proficiency certificate in the University Air Squadron, and was moved to another Wing.

I was at first bewildered by the complicated array of knobs and buttons confronting me in the cockpit. I was convinced that I might at any moment haul up the undercarriage while still on the ground, or switch off the engine in the air, out of pure confusion of mind. However, thanks to the patience and consideration of Sergeant White, I developed gradually from a mediocre performer to a quite moderate pilot.

Hillary's 603 Squadron, flying Spitfires, moved to RAF Hornchurch on 10th August 1940. In the weeks ahead he claimed five Messerschmitt 109s shot down, two more probables and one further damaged.

September 3 dawned dark and overcast, with a slight breeze ruffling the waters of the Thames estuary. Hornchurch aerodrome, twelve miles east of London, wore its usual morning pallor of yellow fog, lending an air of added grimness to the dimly silhouetted Spitfires around the boundary. I pressed the starter and the engine roared into light. Our 603 Squadron strength was eight. We headed south-east, climbing all out on a steady course. At about 12,000 feet we came up through the clouds: I looked down and saw them spread out below me like whipped cream. The sun was brilliant and made it difficult to see even the next plane when turning. I was peering anxiously ahead, for the controller had given us warning of at least fifty enemy fighters approaching very high.

When we did first sight them, nobody shouted as I think we all saw them at the same moment. They must have been 500 to 1000 feet above us and coming

straight on like a swarm of locusts. I remember cursing and going automatically into line astern; then the next moment we were in among them and it was each man for himself. As soon as they saw us they spread out and dived, and the next ten minutes was a blur of twisting machines and tracer bullets. One Messerschmitt went down in a sheet of flame on my right, and a Spitfire hurtled past in a half-roll; I was weaving and turning in a desperate attempt to gain height, with the machine practically hanging on the air screw.

Then just below me and to my left, I saw what I had been praying for – a Messerschmitt climbing and away from the sun. I closed in to 200 yards of him, and from slightly to one side gave him a two-second burst: fabric ripped off the wing and black smoke poured from the engine, but he did not go down. Like a fool I did not break away, but put in another three-second burst. Red flames shot upwards and he spiralled out of sight. At that moment I felt a terrific explosion which knocked the control stick from my hand and the whole machine quivered like a stricken animal. In a second the cockpit was a mass of flames: instinctively I reached up to open the hood. It would not move. I tore off my straps and managed to force it back; but this took time, and when I dropped back into the seat and reached for the stick in an effort to turn the plane on its back, the heat was so intense that I could feel myself going. I remember a second sharp agony, remember thinking ‘so this is it!’ and putting both hands to my eyes. I then passed out.

I was told later that the machine went into a spin at about 25,000 feet and that at 10,000 feet I fell out – unconscious. When I regained consciousness I was free of the machine and falling rapidly. I pulled the rip cord of my parachute and checked my descent with a jerk. The water was not unwarm and I was pleasantly surprised to find my life-jacket kept me afloat. I looked down at my hands, and not seeing them, realized that I had gone blind. So I was going to die. I felt only a profound curiosity and a sense of satisfaction that within a few minutes or a few hours I was to learn the great answer. I remember as in a dream hearing somebody shout: it seemed so far away and quite unconnected with me..... ‘OK, Joe, it’s one of ours and still kicking’.

Richard was indeed alive but horribly burnt. He was transferred to the Queen Victoria Hospital, East Grinstead, to be under the care of Archibald McIndoe, a pioneer in restorative plastic surgery, particularly deep burn, facial disfigurement and eyelids. The group of persons so injured were known as the 'Guinea Pig Club' and McIndoe's treatment included ways of restoring confidence to his patients, who were likely to be suffering from the psychological trauma of their physical injuries and experience.

*Hillary eventually managed to persuade the authorities to allow him back to fulfil flying duties with 54 Operational Training Unit at RAF Charterhall, Berwickshire. He died in a flying accident on 8 January 1943. In between times, Hillary wrote an autobiography *The Last Enemy*, the title taken from I Corinthians XV.26, 'The last enemy that shall be destroyed is death'. It was a factual account of the author's life between 1937 and 1942, with much about his thoughts and feelings and those of his friends in the Oxford University Air Squadron and beyond, as they faced both life in peace and war. It was published in June 1942 by Macmillan and somehow translated for publication later that year for a German readership. Lovat Dickson, who wrote a biography called *Richard Hillary* reported that by 1950 the English edition of *The Last Enemy* had sold more than 135,000 copies, the French edition 35,000 and the American edition a further 15,000 copies. It is still in print.*

*The Last Enemy is serious literature and a very human story. Richard's wartime love affair with Mary Booker is recalled in Michael Burns's 1988 book, *Richard and Mary*. At Trinity College, Oxford there is an annual lecture in his honour, and Sebastian Faulks wrote of Richard in his 1996 book, *The Fatal Englishman: Three Short Lives*. The latest full biography is David Ross's 2003 account, *Richard Hillary: The Definitive Biography of a Battle of Britain Pilot and Author of The Last Enemy*. *Richard Hillary's life is thus well recorded and widely remembered.**

Appendix 1. Former members of the pre-war University Air Squadrons who flew subsequently with RAF Fighter Command during the Battle of Britain

The following list has been compiled primarily from material contained in *Men of the Battle of Britain: A Biographical Directory of The Few* by Kenneth G. Wynn (revised edition, Barnsley: Frontline Books in association with The Battle of Britain Memorial Trust, 2015). This work commemorates the more than 2,900 'pilots and other aircrew from throughout the British Empire and its allies who flew with the Royal Air Force, Fighter Command, between July 10th and October 31st 1940, and earned the 'immediate' award of the 1939–1945 Star with Battle of Britain Clasp'. In order to qualify for this award, individuals were required to have flown at least one authorised operational sortie with one of 71 designated units (66 RAF, Commonwealth and Allied fighter squadrons; 3 RAF flights; and 2 Royal Navy Fleet Air Arm squadrons) during the stated period.

Cambridge University Air Squadron

Christopher John Drake Andreae	Derek Charles MacCaw
John Cyril Lindsay Dyson Bailey	Donald Kennedy MacDonald
Richard George Arthur Barclay	Howard Clive Mayers
Nathaniel John Merriman Barry	James Cosmo Melvill
Allan Walter Naylor Britton	Gordon Thomas Manners Mitchell
William Fleming Carnaby	James Storrs Morton
Rupert Francis Henry Clerke	John Gray Munro
Hon David Arthur Coke	John Charles Newberry
Edward Dixon Crew	Denis Geach Parnall
Brian William Jesse D'Arcy-Irvine	Arthur Peter Pease
John Michael Firth Dewar	Hugh Harold Percy
Antony George Anson Fisher	David John Colin Pinckney
Basil Mark Fisher	Laurence Lee Pyman
Frederick Thomas Gardiner	James Clifton Edmeston Robinson
Keith Irvine Geddes	John William Moir Scott
Stephen Frederick Godden	Francis David Stephen Scott-Malden
Ian Bruce David Erroll Hay	George Edward Thomas Scrase
Barrie Heath	John Wilfred Seddon
Michael Rowland Hill	John Barry Selway
James Hammond Hoare-Scott	Edward Stanley Smith
Arthur Lawrence Holland	Cedric Arthur Cuthbert Stone
Frederick Desmond Hughes	Roy Frederick Watts
Michael Jebb	Nigel Ronald Wheatcroft

Oxford University Air Squadron

Noel le Chevalier Agazarian
Charles Harvey Bacon
James Richard Abe Bailey
James Julius Frederic Henry Bandinel
Ian Norman Bayles
Hugh John Sherard Beazley
Archibald Douglas McNeill Boyd
Percival Ross-Frames Burton
John Champion Carver
Michael Hugh Constable Maxwell
William Edwin Coope
Dennis Humbert Fox-Male
Christopher Neil Foxley-Norris
Henry Gordon Goddard
Ernest Lindsay Hancock
Thomas Peter Kingsland Higgs
Richard Hope Hillary
Sir Archibald Philip Hope Bt
Peter Howes

William Rodney Alexander Knocker
John Wilfred Lund
Harold Stewart Lusk
Paul Francis Mayhew
Christopher John Mount
George Hassall Nelson-Edwards
Derek Keppel Coleridge O'Malley
Richard Carew Reynell
Bruce Arthur Rogers
Richard Michael Bernard Rowley
Francis Herbert Schumer
Alec Maxtone Wright Scott
The Lord Shuttleworth
(Richard Ughtred Paul Kay-Shuttleworth)
Ian Welsh Sutherland
Reginald Ellis Tongue
Archibald Nigel Charles Weir
Robert Sinckler Woodward
Alec Sillavan Worthington

University of London Air Squadron

Richard Ambrose
Neville Anthony Richard Doughty
Henry Michael Ferriss
Robert David Spittal Fleming
Claude Waller Goldsmith
Patrick Arthur Harris
Sydney Jenkyn Hill

Peter Lewis Kenner
Alan Geoffrey Page
Alexander Richard Ross
Ian Raitt Stephenson
William Towers-Perkins
Lewis Benjamin Roger Way
Patrick Hardy Vesey Wells

Appendix 2 The University Air Squadrons, 1925–1939 and from 1941

The pre-war squadrons:

Squadron	Formed	Subsequent history
Cambridge University Air Squadron	October 1925	Disbanded, September 1939.
Oxford University Air Squadron	October 1925	Disbanded, September 1939.
University of London Air Squadron	September 1935	Disbanded, September 1939.

The wartime and successor squadrons:

Squadron	Formed/reformed	Subsequent history
Aberdeen University Air Squadron	January 1941	Merged with Dundee and St Andrews elements of East Lowlands UAS to create Aberdeen, Dundee and St Andrews UAS, October 1981; latter amalgamated with East Lowlands UAS to form East of Scotland UAS , September 2003. Currently serving, 2016.
Aberystwyth University Air Squadron	February 1941	Disbanded, December 1945.
Belfast University Air Squadron	January 1941	Renamed Queens UAS, May 1941; disbanded, July 1996.
Birmingham University Air Squadron	May 1941	Renamed University of Birmingham Air Squadron, October 1951. Currently serving, 2016.
Bristol University Air Squadron	February 1941	Disbanded, July 1946; reformed, December 1950. Currently serving, 2016.
Cambridge University Air Squadron	October 1940	Currently serving, 2016.
Cardiff University Air Squadron	February 1941	Disbanded, October 1943.
Durham University Air Squadron	February 1941	Renamed Northumbrian UAS , August 1963. Currently serving, 2016.

Edinburgh University Air Squadron	January 1941	Merged with St Andrews and Dundee UAS to form East Lowlands UAS, January 1969; latter amalgamated with Aberdeen, Dundee and St Andrews UAS to form East of Scotland UAS , September 2003. Currently serving, 2016.
Exeter University Air Squadron	August 1941	Disbanded, October 1943.
Glasgow University Air Squadron	January 1941	Renamed Universities of Glasgow and Strathclyde AS, January 1965. Currently serving, 2016.
Hull University Air Squadron	February 1941	Disbanded, October 1943; reformed, December 1950; merged into Yorkshire UAS , March 1969. Currently serving, 2016.
Leeds University Air Squadron	January 1941	Merged into Yorkshire UAS , March 1969. Currently serving, 2016.
Liverpool University Air Squadron	January 1941	Disbanded, June 1946; reformed, December 1950; renamed University of Liverpool AS, January 1952. Currently serving, 2016.
London University Air Squadron	April 1941	Renamed University of London AS, December 1949. Currently serving, 2016.
Manchester University Air Squadron	January 1941	Renamed Manchester and Salford UAS, May 1974. Currently serving, 2016.
Nottingham University Air Squadron	April 1941	Renamed East Midlands UAS , November 1967. Currently serving, 2016.
Oxford University Air Squadron	October 1940	Currently serving, 2016.
University of Reading Air Squadron	March 1941	Disbanded, October 1943

St Andrews University Air Squadron	January 1941	Renamed St Andrews and Dundee UAS, August 1967; merged into East Lowlands UAS, January 1969; Dundee and St Andrews elements of latter subsequently merged with Aberdeen UAS to form Aberdeen, Dundee and St Andrews UAS, October 1981 and East of Scotland UAS in 2003. Currently serving, 2016.
Sheffield University Air Squadron	March 1941	Disbanded, October 1943.
Southampton University Air Squadron	February 1941	Currently serving, 2016.
Swansea University Air Squadron	January 1941	Disbanded, July 1946.
University of Wales Air Squadron	1963	Currently serving, 2016.
Universities of Northern Ireland Air Squadron	September 2015	Currently serving, 2016.

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- 17 TNA AIR 2/100 File A.12449.
- 18 The title of Secretary of State for the Air Force was changed to that of Secretary of State for the Royal Air Force in March 1919; to Secretary of State for War and the Royal Air Force in January 1919; to Secretary of State for War and Air in March 1919; and to Secretary of State for Air in April 1921.

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- 19 TNA AIR 2/100 File A.12449. The benefactor in question was Emile S Mond. His son, Captain Francis Leopold Mond, was killed on 15 May 1918 whilst serving with No 57 Squadron RAF; he is buried in Doullens Communal Cemetery Extension No 2, the Somme [<http://www.cwgc.org/find-war-dead/casualty/2208426/MOND,%20FRANCIS%20LEOPOLD>, accessed 23 June 2016].
- 20 TNA AIR 2/100 File A.12449.
- 21 TNA AIR 2/100 File A.12449. A note attached to a letter on this file from Shipley to Seely, dated 26 September 1919, states that Jones had graduated from Cambridge with a First in Mechanical Sciences in 1909. Between 1910 and 1912 he was a member of the National Physical Laboratory and held a Research Scholarship from Imperial College, London. In 1913 he joined Sir G.W. Armstrong Whitworth & Co, and in September 1914 he left the latter for the Royal Aircraft Factory. Jones transferred to the Armament Experimental Station, Orfordness, in May 1916, where he was eventually appointed Assistant Controller with the rank of Lieutenant Colonel.
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- 24 Cmd 467, 5.
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- 26 *(Provisional) Regulations under which Permanent Commissions in the Royal Air Force may be obtained by University Candidates*, December 1920, 3 (emphasis as in original); on TNA AIR 2/934. These provisional regulations were superseded subsequently by Air Publication AP 904 *Regulations under which Permanent Commissions in the Royal Air Force may be obtained by University Candidates*, June 1922; on TNA AIR 2/935.
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- 43 AIR 2/312 file 596152/25 Enc 7A.
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- 45 Air Orders AO 1608 ‘Formation of “Cambridge University Air Squadron”, 15 October 1925, and AO 1609 “Formation of “Oxford University Air Squadron”, 15 October 1925, TNA AIR 3/320 File 629420/25 Encs 4A and 5A.; *Flight*, 12 November 1925, 759.
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- 48 Robertson, ‘Cambridge University Air Squadron’, 479-80.
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ILLUSTRATIONS AND CREDITS

Front and back cover, top

Avro Tutors of Oxford University Air Squadron based at RAF Abingdon.

Back cover, lower

Wing Commander Keith Park (left, back to camera) pictured talking with the Vice-Chancellor of Oxford University, Dr F J Lys (Provost of Worcester College) after a flight in one of Oxford University Air Squadron's aircraft, November 1932.

On the right of the picture is Air Marshal Sir Geoffrey Salmond, Air Officer Commanding-in-Chief, Air Defence of Great Britain, later Chief of the Air Staff on succeeding his younger brother, Sir John Salmond.

Courtesy of the Air Historical Branch, MOD.



Clive Richards graduated from Brunel University in 1989. Following a brief career in the financial services sector, he entered the Royal Air Force Museum in 1993 as a curator in the Department of Research and Information Services, working primarily with the latter's extensive archive collection. Subsequently, in 1996 he left the Royal Air Force Museum for the Ministry of Defence Air Historical Branch, serving as the latter's senior researcher until December 2008. Between 2009 and 2013 he was a postgraduate researcher in the Department of History, University of Exeter, and he is currently a postgraduate student at the University of Birmingham. In addition to co-authoring publications examining the life and career of Air Chief Marshal Sir Keith Park and commemorating the seventieth anniversary of the Battle of Britain, he has contributed articles on a variety of subjects relating to UK military aviation history to internal Ministry of Defence and commercial publications, and has delivered papers to meetings of the Royal Air Force Historical Society, the British Commission for Military History and the Polish Heritage Society.

