

Following initial and secret discussions in 1940 between Churchill and Roosevelt regarding the British government's need for training facilities and equipment for the RAF and RN; beginning in 1941, five schemes operated in the USA to train RAF and RN aircrew. The five schemes were the Refresher school, the Arnold Scheme, the Towers scheme, the PAA scheme and finally the British Flying Training Schools. This is an account of just one of these schemes, the BFTS's from which almost 7000 RAF pilots gained their wings.

Introduction

Air Commodore Pirie, the Air Attache and a senior member of the British Purchasing Committee in Washington D.C. recalled " The story starts with the telephone conversation on March 5th when General Arnold Deputy chief of staff and chief of the Air Corps called me and said, "when can you come in and talk training with me? ". I told him that I was just leaving for the War Dep't and would be with him in 20 mins. Entering the General's rooms up at the Dep't, I found a crowd of about 15 people assembled there all of them I knew . Without any preliminaries the General in his usual bluff fashion indicated with a wave of his hand to the assembled people and said " I think you know all these people now lets talk turkey! . You've been worrying me for about a year and a half about what you call the Harvard, we're going to give you 260 primary, 285 basic trainers and here are 6 of our best civilian school operators prepared to put up schools for you. Is this of interest?"

On the same day General Arnold informed the British airattache assembled, that once the Lease-Lend bill had been cleared by Congress, the U.S. Army proposed to offer 260 elementary and 285 advanced training aircraft to the the U.K. government for the training of RAF Cadets in American Civilian operated schools . "Hap" Arnold explained to the British listeners that tentative plans had been worked out for the initial operation of R.A.F. Pilot Training Schemes which were to be offered at 6 civilian flying schools. Although the operators had no facilities to spare in existing establishments, they were all willing to build special schools, complete with all facilities at a cost of \$400,000-500,000 each, accomodating 140 students at a time (70 primary and 70 advanced). Arnold explained that they had calculated that with a 20 week length of each course with an assumed 20% pilot elimination rate, the six civilian operators could expect turn out a total of 1300 pilots a year. In return they would charge \$25 per hour primary training, and \$35 per hr for advanced instruction.

Advantages

The BFTS programme was regarded by the RAF as a form of insurance against under production and as such did not cause any reduction in the overall number of RAF and Empire S.F.T.S 's needed . At the beginning of February 1941, however, there still remained nine for which homes were required. Canada was anxious to have to have these and Rhodesia offered to take two more . The Air Ministry however was of the opinion that the Canadian training organisation as it stood would use up all the existing Canadian resources and any further development there would be undesirable and impracticable. It was therefore decided in February to establish two of these courses in S. Rhodesia with the possibility of establishing a

further service course in the USA. Although there would be a shortage of trainers, difficulties in facilitating bomb and gunnery training, together with dollar expenditure, these were not prohibitive. The training shortage and dollar expenditure would still arise even if more training were carried out in America and it was felt preferable to do it in the US.

In general, Air Marshal Garrod the Air Member for Training in Britain, wanted short term help to increase the RAF's hitting power in 1941 - by reducing the no' of men who had to be withdrawn from the first line to instruct, and long term help to reassist the strain on a newly expanding training organisation. There was a shortage of advanced trainers and difficulty was being experienced in instruction, especially at night from an operational base. In addition, the Air Minister took the opportunity to seek assistance: the provision of ferry pilots for the Atlantic and Takoradi supply routes, as well as for internal ferry duties, and experienced instructors. The latter, because too many ex-pupils were being used for teaching navigation. Training aircraft and radar mechanics were also badly needed.

It was intended initially that two of the proposed BFTS schools could be deferred into the training of what was thought likely to be an influx of American volunteers to the RAF. This role had been undertaken by the four civilian operated Refresher Schools in the States (who indeed produced 598 American pilots for service in the RAF). However with no legal way of giving publicity in the USA to attract these volunteers, combined with America's entry into the war at the end of the year, this idea did not come to fruition.

Nevertheless a major and important advantage of the proposed scheme was that by situating RAF pilot training schools in the States, it was immediately apparent that such instruction could be conducted under almost ideal weather conditions, and in a geographical environment well away from the traumas and pressures of war-torn Britain.

Yet, despite the manifest advantages of this scheme, the RAF could see that it had its drawbacks. The US Army Air Force would provide the advanced trainers which were all single engined types, AT 6a's Harvards because even the US Army themselves had no twin engined trainers. The proportion of single engined to twin engined trained pilots being produced at the Empire air training schools was already too high and the new scheme would considerably increase that proportion.

Although the needs of the RAF for trained pilots were most urgent, it was unlikely that any of the six schools suggested, would be built and in operation quickly. Indeed the estimate was somewhere between 45 to 90 days, and the capital cost of roughly \$300,000 for building the airfields and facilities would have to be met by the UK. The British concerns about the cost were not eased by US insistence that the British Cadets should have amenities on the same generous scale as similar schools built for the American Army Air Force including, for example, swimming pools and tennis courts at each school. Whilst the suggested schools would use a previously untapped source of instructional facilities, the price of £25 primary and \$35 advanced was considered high by the British government. Though 285 advanced trainers would be made available they would be in substitution for, and not an addition to, 200 which the UK had been trying to buy from

America for use in UK and in the Empire.

Later, further unforeseen factors became apparant as the newly qualified pilots coming from the schemes on return to the UK found themselves posted to (P)AFU's and as one pilot recalls " being told that we now had to learn to fly in English weather of all sorts and to learn navigate in the UK (and, of course N.W.Europe in due course)".

The Finer Details of the Scheme

Consequently, in response to General Arnolds offer, the idea of putting SFTS's in the USA was inherently attractive and it was accepted by the Air Ministry the next day, on March 6th.As a result General Arnold then flew to Britain in April to discuss in detail Britains training requirements.

Numerous details were worked out over the following weeks . Night flying instruction was to be given, but armament and standard beam approach instruction were not practicable.Pupils were to have I.T.W. training in the UK before going to America via Canada. The Chief Flying instructors were to attend a course on RAF training methods, and it had been requested that the Canadians should provide this at Trenton.

The six civilian school operators were :

- B.F.T.S. No'1 Terrell Texas operated by Major W. Long.
-NO'2 Lancaster California by Major C.C.Mosely.
-No'3 Miami Oklahoma by Captain M.W.Balfour.
-No'4 Mesa Arizona by Mr J.Connelly.
-No'5 Clewiston Florida by Mr Riddle.
-No'6 Ponca City Oklahoma by Mr H.S.Darr.

Each operator was instructed to submit detailed proposals, following which the courses were then officially named "The British Flying Training Schools".

Every individual BFTS had a capacity of 200 pupils on a 20 week course , providing the equivalent of the RAF's E.F.T.S. and S.F.T.S. pilot training. It was intended that the total out-put of 150 pupils per month from the six schools would be equivalent to two and half standard sized S.F.T.S. schools. Initial plans were laid, detailing that the first 100 pupils for these schools were to leave the UK in mid-April and to commence training on the 31st of May 1941

However, the need to set the scheme in operation quickly, with the intention of training RAF cadets by the end of May 1941,the organizational details of Lease-Lend took longer to resolve than was expected . In order accelerate the development of the BFTS's,and to overcome a legal difficulty in the Arnold scheme, there had been a suggestion that the six school BFTS scheme should be replaced by an extension of the Arnold Scheme, with the US Army taking responsibility for the administration of the Civilian schools

and providing the RAF with equivalent capacity in US army schools . However, this project to unify the B.F.T.S.'s and the Arnold Scheme proved impracticable , whilst the initial difficulties were overcome with regard to the implementation of the B.F.T.S.'s. Rapid progress was made in construction by the end of May. The contract provided that the civilian operators would be responsible for the construction of the schools , the UK advancing 60% of the building costs .It was hoped that the schools would be finished and operating within 2 or 3 months.

Implementation of the scheme

The US War Dep't, the RAF and civilian operators quickly approved and selected the sites for the first five schools. Terrell, a small town, some 30 miles east of Dallas ,Texas, was a site that for some years had been used by a small flying club, and when the proposition was put to the town council that Terrell could become the first of the BFTS's, they were so enthusiastic about the scheme that they offered to put in all facilities free of cost, and their support was such that the school was ready within 8 weeks from selection of site! .

Lancaster, California 50 miles north of Los Angeles, was chosen as the site for the second school . The 3rd BFTS was to be located at Miami Oklahoma, a small town a 100 miles north-east of Tulsa. Mr Harry A Burkey, is accredited with the idea of setting up a BFTS at Miami. Indeed Harry Burkey who clearly was a far sighted person, and who was also secretary of the Miami Chamber of Commerce draughted a proposal which he took to Air Commodore Pirie in Washington DC on February 15th, some weeks before the lease-lend scheme was approved. Armed with Congressional and RAF approval, Air Commodore Pirie and Harry Burkey approached Captain Maxwell Balfour, the operator of Spartan Aeronautics in Tulsa, and on May 29th a contract was signed by Spartan, enabling them to become the civilian operator of the 3rd BFTS, based at Miami Oklahoma. The airfield at Miami was also used by a small aero club which was prepared to move elsewhere, and there too the local authorities were anxious to provide facilities. This school was constructed with amazing speed , and the auxilliary field was in use 3 weeks after work began. The site initially chosen for the 4th school was found to be on land inhabited by an Indian reservation, and, as the Indians were not prepared to relinquish their land, an alternative site was eventually chosen six miles east of Mesa near Phoenix, Arizona . And Clewiston at the foot of Lake Okeechobee, 95 miles north-west of the famous resort of Miami Florida, for 5 B.F.T.S.. It is also interesting to know that the school was only 40 miles away from Arcadian, an aerodrome used for training of RAF pilots during the First world war, and which was later to train pupils under the Arnold scheme.

The selection of the site for the 6th school met with rather more difficulty. Numerous sites were examined; no fewer than 4 nearly materialised , but had to be abandoned for one reason or another, before a suitable base at Ponca City, Oklahoma was found. It is interesting to note that Ponca almost became 3 BFTS, before Harry Burkeys representations on behalf of Miami, Oklahoma proved irresistible.

It became rapidly clear that the schools would not be able to start work on the original day planned, 17th May 1941, and the US Army offered to train the first B.F.T.S. pupils in at civilian operated primary schools working

The American government themselves, were very aware of the need to have Americans civilians workers (and indeed the US pilots who trained in the same schools alongside the British cadets from November 1942 until December 1943) employed at the bases who were first screened in order to make sure that they were not prejudged against the British.

Pilot Training Syallabus

Wing Commanders HAV.Hogan and FW Hilton, together with Squadron Leaders S.Mills and T.Whitlock and A.Beveridge previously had negotiations with Group Captain Carnegie at the Air Ministry in Washington with the aim of providing a composite syllabus which would cover both the EFTS and SFTS sides of training. However, the start to the scheme at No 1 BFTS was not without its difficulties for the RAF officers sent to prepare for the arrival of the first course, found on their arrival no aircraft, official course syllabus available, no maps, instructional equipment, parachutes and the only policies that they could turn to were those that the CFI and CGI had brought over with them. The two officers W/C Hilton AFC and Sq.Ldr Beveridge then returned to the Air Ministry in Washington to seek support and help in locating an appropriate supply of material but as Group Captain Carnegie (a major architect of all training in the USA for the RAF), had now left the Scheme, they were singularly rebuffed in their quest. The CFI and the CGI then decided to rapidly return to the UK to collect all the necessary information to run a SFTS, with the CGI gleaning these details from the OTU's at Upper Heyford and Heston, together with EFTS material from 11 EFTS at Perth. Consequently there was considerable duplication of material from the RAF SFTS programme.

Because the RAF, in direct contrast to USAAF, were the people who had direct experience of operational flying under war conditions, it was clearly important to the RAF that the syllabus for pilot training in the USA should be firmly based on RAF lines and should correspond closely to the EFTS and SFTS schools operated by the RAF. The objective for the RAF was to have pupils trained up to OTU entry standard. Consequently the Primary stage in which cadets would fly 70 hrs on Basic trainers such as the Stearman PT 17, or Fairchild PT 19 (only operated by number 3 BFTS), with each school being allocated 35 aircraft, was seen as being the equivalent of the EFTS school course. This stage was to last for 10 weeks. The advanced stage, also to last for 10 weeks, enabled successful students from the primary stage to undertake approximately 80 hours flying training on basic and advanced trainers, ie Vultees BT 13a's and AT 6a's Harvards (of which there was an allocation of 40 per school)

Nevertheless, during the first year the wastage rate stabilised at roughly 25%, slightly lower than had been anticipated, and which compared very favourably with the Arnold schools wastage rate of 40-50%. The standards of training were roughly the same for both schemes, and it was believed that the success of the B.F.T.S.'s. were largely to do with enthusiasm of the civilian school operators (the Arnold schools were operated by the USAAF). For example, at No' 2 B.F.T.S. based at Lancaster California, the operator, Major C.C.Mosely in agreement with the RAF CO Sq/Ldr Tommy Whitlock, made a policy decision to attempt to facilitate every pupil reaching the standard required to gain his wings, and paid out of his own pocket for whatever extra tuition was required. However, one cadet managed to fail his course,

and although 49 out of the course total of 50 received their wings, the (expensive!) experiment was scrapped.

The RAF agreed to supply one Chief Flying Instructor and one Chief Ground Instructor for each pair of schools, together with an adjutant and NCO in charge of discipline. Because of concerns about instrument flying equipment, night flying and armament instruction deficiencies in the syllabus, by July an RAF instructor was sent to each school in an attempt to improve these deficits. The RAF made positive attempts also to obtain link trainers at the schools from the very outset but quickly discovered that the Americans had bought the whole of the existing supply for their own use.

The American civilian instructors at these schools were very experienced pilots themselves, most having had USAAC experience and considerable flying with civilian airlines, some having been mail pilots, and one from Ponca even having flown in the film "Hells Angels". Not all the instructors were "getting on" in years either, for many of them had started flying solo at 15 or 16 years of age, and had therefore accumulated many hours of flying experience by the time they became instructors at the BFTS's.

There were initially considerable differences in pay between the American flying and ground instructors. To take one example of such disparity in conditions of service, at No'2 BFTS, the system employed with regard to flying instructors entailed the newly arrived instructor (whatever his previous experience) starting instructing on primary's and then graduating from there through basic to advanced, the rate of pay increasing as he graduated from one stage to another. In 1942, the new instructor in primary making \$300 per month, and the advanced instructor getting \$525 per month (although it should be said that the rates of pay for flying instructors at No'2 BFTS in 1942 were considered to be the highest of all the civilian operated schools—but with the converse being true for ground instructors). A basic payment of \$200 per month was made to the senior ground navigation instructor, although subsequently additional payments were made to ground instructors who had gained extra CAA ratings.

Concerned by the number of crashes during the training of aircrew overall, and the subsequent losses in both human life and aircraft, in December 1941, the Air Member for training introduced a new plan which aimed at raising the standards of pilot training by providing more flight hours in the pre-OTU stages of courses. The training syllabus for RAF EFTS and SFTS schools was extended in length from 20 to 28 weeks and the flying hours accordingly adjusted from 150 to 200. Therefore in January 1942, the primary stage at the BFTS's course now lasted 14 weeks and gave 91 hrs on primary trainers and the basic/advanced stage 14 weeks with 109 hrs flying time.

The Expansion of the B.F.T.S.'s

Following America's entry into the war in December 1941, it was recognised by the USAAF that they were themselves short of pilot training facilities and in September 1942, an RAF review taken of their own pilot training requirements within the USA, led to the decision being made that in order to maximise the facilities offered at the BFTS's sufficient to retain the five existing schools, approximately 1/5th of each course could be filled by USAAF cadets. Their were very definite advantages to this scheme for the

RAF, not the least that the aircraft establishments at each school was raised from 20 basic and 20 AT's to a single total for AT's of 64, with the BT 13a's Vultee "vibrators", being withdrawn from service in the BFTS's. A further potential advantage for both the Americans and the RAF would be the mutual co-operation and interchange of ideas, not only between British pupils and American instructors but also between the British and American Cadets. The RAF quickly saw the opportunity to reduce BFTS course lengths to 27 weeks, timed to phase with the corresponding intakes in the USAAF programme, and as a consequence the primary course was reduced from 14 to 9 weeks, providing 70hrs flying time, and the advanced course was extended to 130hrs flying time (14 to 18 weeks in length). With the cadet capacity raised for each school from 200 to 300, intakes of 100 took place every nine weeks consisting of 83 RAF and 17 USAAF cadets. This change took place from the 12th November 1942. With the increase in school capacity the station personnel at these establishments increased, with one American officer to look after the American cadets, and three RAF Flight Lieutenants, two of whom were assistant flight supervisors and one a navigator instructor, together with one wireless operator/airgunner (signals instructor), posted to each school. During the year of 1942, an estimated 1612 cadets gained their wings from these schools.

Until April 1944 the five schools (No'2 BFTS having closed in December 1942), continued to operate on this basis. In the autumn of 1943, as a temporary expedient the intake was increased from 80-90 RAF cadets, and 17-20 USAAF cadets, this increase being directly in response to a request by the Air Ministry for an increase in the out-put of trained pilots.

Plans to reduce the scheme

By November 1943, a comprehensive review of aircrew requirements, in the light of the positive upward trend in the direction of the war for the Allies, led to a decision being made to reduce the pilot out-put (many pilots beginning to return to the UK to spend substantial periods of time PRC and ACHC's before receiving postings). Simultaneously the Americans discovered that they too needed to reduce their out-put of pilots and the last intakes of American pupils at the BFTS's was on 8th December 1943 and graduating on 14th June 1944 (1862 pilots having graduated during the year). The corresponding reduction in the size of the courses following the withdrawal of American cadets, meant that one school could be closed for economic reasons and this capacity made up by filling the American quota at the other four schools with RAF pupils. It was decided that No'6 BFTS, Ponca City Oklahoma, should take its last intake on the 8th December 1943, although for practical purposes the school continued in operation on April 17th 1944, when its last intake (course No'17) was sent to the remaining schools (in particular 1, 3 and 4 BFTS).

The backlog of pilots was causing congestion at the PRC's in the UK, and this led to a decision being reached that course should be extended by three weeks (the addition being at the primary stage), providing a total of 220 hrs flying time by March 1944. Many pilots who were trained around courses numbers 18 to 20, on return to the UK found themselves as one of around 1500 RAF pilots "loaned" to the Army to train as glider pilots for the Rhine crossing in March 1945.

The closure of the British Flying Training Schools in America

Until May 1945 the BFTS's continued on this basis, and then, following the cessation of hostilities in Europe the Americans promptly discontinued all USAAF pilot training at the civilian operated schools and were keen to close the BFTS's. Nevertheless discussions with the RAF kept open the schools until the 20th August 1945, in order to enable the RAF to re-establish a training scheme in the UK, with the intention that the final course would graduate early in 1946. However, these plans did not come to fruition as the Japanese surrender on the 15th August 1945, meant that the lease-lend scheme should rapidly end, and so it did after course 25 had passed out on August 25th, a total of 3098 cadets having gained their wings during 1944 and 1945. Courses well into their training at this time were returned to the UK and some were given the opportunity to complete their training, although a course due to start training on the 28th August was returned to the UK, without this opportunity.

Postscript

During the second world war, no less than five schemes were operated in the USA to train aircrew for service in the RAF, producing an estimated out-put of 16,015 qualified aircrew. Of this number, nearly 7000 RAF cadets and 452 USAAF cadets gained their pilots wings from one of these schemes, the "British Flying Training Schools". No scheme training pilots for the RAF in America produced a larger number of trained pilots. Many of those who returned to the UK and after probably having been to (P)AFU's and OTU's, found themselves flying operationally in Fighter, Bomber, or Coastal Command, or as staff pilots, instructors at EFTS, SFTS's or GTS's, and even seconded to the Glider Pilot Regiment. The Cadets of the BFTS's went on gain countless awards for bravery, including the Victoria Cross. Many, of course, did not survive the war.

Yet it is a legacy to the camaraderie achieved during the training of RAF pilots in the States, that contacts and friendships fostered roughly 45 years ago, still remain close today and are in many cases being re-established on both sides of the Atlantic. Finally it should be mentioned that the BFTS, Arnold and Towers schemes have currently active and growing associations, and it is of note that No's 1, 3, 4, 5 and 6 BFTS alone have associations with a gross total membership of well over 2,000.

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References.

- Public Records Office.
- No 1 BFTS association. Bert Allam.
- No 3 BFTS association. Group Captain Derryk Maddox and "Open Post"
- No 4 BFTS association. Bill McCash AFC and Herbie Buckle.
- No 5 BFTS association. John Potter and Ray Searle.
- No 6 BFTS association. Lillian Taylor. and "Tails Up"
- Squadron Ldr Phil Murton. ex-6BFTS.
- Wing Commander Bill Talbot DFC and Bar.