R.A.F. MONOGRAPH

MANNING

PLANS AND POLICY

Air Historical Branch (1)
Air Ministry

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CHAPTER 1

THE BASIS OF R.A.F. MANNING POLICY

With the signing of the armistice with Germany in November 1918, the first national consideration became the reconstruction of industry, and a rapid and somewhat hasty demobilisation of the Services followed. The strength of the Royal Air Force fell from 30,000 officers and 265,000 airmen in November 1918, to 3,000 officers and 24,000 airmen in October 1920. It had thus been reduced to less than one-tenth of its wartime strength within the short space of two years, and it was around this small nucleus that its peacetime reconstruction on a permanent footing was planned.(1)

The Secretary of State for Air, Mr. Winston Churchill, presented to Parliament in December 1919, a memorandum prepared by the Chief of the Air Staff, Sir Hugh Trenchard, in which he outlined a scheme for the 'Permanent Organisation of the Royal Air Force'.(2) The far sighted principles which were laid down by Sir Hugh were destined to be the pivots of Royal Air Force manning policy for the following fifteen years and were based on the assumption that there would be no need for at least ten years for anything in the nature of general mobilisation. Acting on this assumption, which was an accepted principle of Government policy, it was decided to reduce Service squadrons to the minimum considered essential for overseas garrisons with a very small number in the United Kingdom as a reserve, and to concentrate the whole of the remaining resources on technical research and on perfecting the training of officers and airmen.

Owing to the need for a large number of officers in the junior ranks, and to the comparative scarcity of higher appointments, it was not possible to offer a career to all officers, and it was accordingly decided that only fifty per cent of them should be granted permanent commissions, the remainder being obtained on short service commissions or by the secondment of officers from the Army and Navy. The channels of entry for permanently commissioned officers were to be through the Royal Air Force Cadet College, which opened at Cranwell in February 1920, from the Universities and from the ranks.

The policy for the provision of technical officers was that they should be permanent officers of the General Duties Branch who had completed five years flying service. They were

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(1) Manpower planning was at first the responsibility of the Department of the Master General of Personnel, a member of the Air Council, under whom there was a Director of Manning. In May 1919, the post of Master General of Personnel was abolished and his duties were transferred to the Directorate of Personnel under the Chief of the Air Staff. This remained the position until 1924, when the Deputy Directorate of Manning was formed with the responsibility for provisioning airmen requirements, other than airman pilots. The post of Inspector of Recruiting was created in April 1919.

(2) Cmd. 467.

then required to select the particular technical subject which they wished to make their special study during their subsequent career, e.g. navigation, engines or wireless. On the completion of their technical training, officers would interchange periods of technical employment with periods of general employment. It was hoped that this policy would obviate the danger of developing technical branches which were out of touch with fighting and flying requirements. Moreover, the fact that specialist officers would spend only a part of their time on technical duties meant that there would have to be more specialist officers than posts, a fact which would help to build up a reserve of trained technical officers to replace casualties or meet the needs of expansion in the event of war. At the same time, it was decided to separate Stores and Accountant officers from the General list.

The most difficult problem of all those which had to be tackled in the formation of the permanent peacetime Air Force was the training of the airmen. Demobilisation had removed most of the best mechanics and it was found that few skilled men would join the Services in peacetime. It was, therefore, decided to enlist the bulk of those belonging to long apprenticeship trades as boys, who would undergo a course of three years training before being passed into the ranks. This was the beginning of the Aircraft Apprentice scheme which was to provide the Air Force with so many of its highly skilled tradesmen.(1) The first entry of R.A.F. apprentices under this scheme took place in February 1920. Halton was decided upon as the most suitable place for apprentice training, but, until accommodation was ready for them there, the apprentices were trained at Cranwell. The success of the aircraft apprentice scheme encouraged the Air Ministry to adopt a similar scheme for apprentice clerks and provision was accordingly made in 1926 for boys to be put under training at the R.A.F. Record Office.

With regard to reserve forces, Sir Hugh Trenchard emphasised that, although mobilisation on a large scale was not taken into account, it was very necessary to provide a small reserve to meet any sudden call in the event of a small war anywhere in the Empire. No immediate difficulty was anticipated in enrolling as many ex-officers and airmen as were required, (2) but it was also intended to lay, if possible, the foundations of a future reserve Air Force on a territorial basis. After much delay, caused by financial considerations, this proposal took effect in the formation of the Auxiliary Air Force.

These proposals of Sir Hugh Trenchard for manning the Regular and Reserve Air Forces remained the underlying principles of the policy which was followed for many years afterwards. In the years of feverish expansion which preceded the outbreak of war in 1939, the foresight which had prompted the inception of the aircraft apprentice scheme was of inestimable and increasing value to a Force which contained an ever growing proportion of semi-trained and untrained men. Many thousands of additional officers were commissioned but the basic commissioning policy laid down in 1919 persisted. In fact, the vast majority of the changes in the R.A.F. manning policy between

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(1) See Appendix 10 for R.A.F. trades as in 1919.
(2) The regular Air Force reserve consisted of Classes 'A', 'B' and 'C' for officers and Class 'E' for other ranks. Class 'D' of the Reserve of Air Force Officers was added in June 1920.

1919 and 1939 were developments of, rather than breaks away from, the principles laid down by Sir Hugh Trenchard, and were due to the changing requirements of a Force whose aircraft and equipment were of increasing technical complexity and which was nearly quadrupled in size during the five years preceding the outbreak of war.

Early Developments in the Royal Air Force Manning Policy

The first important development in the manning policy laid down in 1919 was the introduction of the airman pilot in 1921,(1) a step which was directed towards financial economy by making possible a reduction in the number of short service officers who were, in any case, difficult to obtain. The Air Council felt that airman pilots could, in addition to their flying duties, undertake some of the minor technical duties in signals, armament, photography and navigation which had hitherto devolved entirely upon officers. Owing to the failure of a similar plan for airman pilots during the 1914-1918 war, the scheme was at first experimental, but it was put on a permanent footing when it proved to be a success. Treasury authority was given in 1923 for a small number of permanent commissions to be granted annually to airman pilots. The airman pilot establishment rose steadily during the subsequent years, and when war was declared in 1939 their strength was 1,724.

It was not until 1924 that circumstances permitted the formation of the Auxiliary Air Force and the Special Reserve, both of which were created under the Auxiliary Air Force and Air Force Reserve Act of that year. Members of the two forces, which were intended solely for home defence, could not be sent abroad, but could be called out 'to serve within the British Islands in defence of the British Islands against actual or apprehended attack'. The two forces differed in that whereas the A.A.F. was entirely voluntary organisation,(2) about one third of the strength of the Special Reserve squadrons was regular personnel. The decision to form these two types of non-regular units simultaneously was made in order to test which would be the more likely to be the more effective and to have the greater popular appeal. By the end of 1930, there were eight Auxiliary Air Force squadrons and four Special Reserve squadrons in operation.

Two changes in the policy for filling officer posts were made in 1928. The first was a decision to introduce a new class of medium service officer, selected from short service officers who, on completing their five year engagement, volunteered to serve another five years, in medium service. On completing the latter period, they passed to the Reserve in the same way as short service officers. They were normally employed on flying duties and were eligible for short technical courses appropriate to their duties.(3) It was anticipated that a little over one hundred medium service officers would be borne, and that 20 - 25 appointments to medium service would be made annually.

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(1) A.M. File 608694/25
(2) In fact, however, nearly one third of the ground personnel of the A.A.F. squadrons in September 1939 were regular instructors who could not be withdrawn from the squadrons because of the effect upon efficiency.
(3) A.M.O. A.427/28.

At the same time it was decided to remove about one-fifth of the total existing specialist posts from the officer establishment and to allow warrant officers or civilians in place of them.(1) This not only relieved the officer establishment but improved the prospects of technical airmen of promotion to warrant rank. Two years later, in 1930, the policy of promoting warrant officers to commissioned rank was introduced in the Stores branch and was extended to the General Duties branch in 1933 and to the Accountant branch in the following year. Commissioned warrant officers were expected eventually to fill most of the junior posts, while permanent officers would fill the great majority of senior posts and sufficient junior posts to provide an adequate flow to the senior posts. Retired officers were to be employed increasingly as civilians in the Stores and Accountant branches.

The aircraft maintenance trades underwent a far-reaching re-organisation in 1932.(2) The developments of the previous twelve years had changed the problem of aircraft maintenance in two respects; first, the wooden aircraft had been replaced by metal construction with the result that carpentry was no longer the basis of the rigger's work: secondly, the reliability of engines had improved to a remarkable degree with the result that the frequency of overhauls necessary for safety had substantially decreased. Moreover, experience had shown that fitters and riggers spent a good deal of their time on duties which gave no scope for their skill. The Air Council accordingly decided to amalgamate the trades of fitter and rigger, forming a new Group I trade of fitter-rigger; gradually to substitute fifty per cent of the aircraftmen of those trades in flights and workshops by an unskilled class of Group V men to be known as Mates; and to adopt a predominantly short service system for the ex-apprentice airman, only allowing twenty per cent of each year's entry to continue in the Service after completing their initial twelve years engagement. This would provide better career prospects for those airmen who were re-engaged and would create an opportunity for building up a reserve of fitters and riggers. As the substitution by Mates would amount to thirty-five per cent of the current total establishment of fitters and riggers, it was decided to reduce the number of entries to apprentice training. This decision was much regretted later when expansion began in 1934, for the shortage of highly skilled apprentice-trained airmen who could be employed as instructors and in supervisory posts proved to be one of the most serious and persistent problems confronting the manning planners.

These were the outstanding changes and developments in the Royal Air Force manning policy between the years 1919 and 1934. The keystones of that policy were the assumption that no major war would break out for at least ten years, and the need for financial economy. As a result of these two factors, the Royal Air Force was in no position in 1934 to embark upon a period of rapid expansion. The result of the rigid, and sometimes shortsighted, economy, which had been exercised was that the Air Force was faced in 1934 with a serious lack of training facilities, with a decreased number of men completing and undergoing apprentice training, and with a regular reserve whose training had been largely neglected and which had been deliberately maintained at less than the required strength.

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(1) A.M.O. A.426/28.
(2) A.M. File 384451/35.

CHAPTER 2

THE EXPANSION OF THE ROYAL AIR FORCE - 1934 TO 1938.

When the newly appointed Defence Requirements Committee opened its enquiry into defence deficiencies in November 1933,(1) the Royal Air Force totalled 3,442 officers and 27,044 men, including apprentices, who maintained a force of eighty-eight service squadrons with its background of training establishments, repair depots, etc.(2) Three months later, against a darkening international background, the Committee issued its report in which it emphasised, as being of the first importance, that the fifty-two squadrons programme should be completed and its war reserves be built up.

As a result of the breakdown of the Disarmament Conference and of the accumulating evidence that Germany had begun to re-arm in earnest, the Government were compelled to recognise in the spring of 1934 that the initiation of steps to provide for the safety of the country could not be delayed. In July 1934, therefore, they approved Expansion Scheme 'A', the first of the R.A.F.'s pre-war expansion programmes. Scheme 'A' provided for an increase in the home defence force to 75 squadrons by 1939 in place of the 52 of the current programme, of which only 42 as yet existed. Owing to financial difficulties and to the fact that it would be some years before Germany would be ready for war, it was decided to postpone the provision of the bulk of the war reserves until the years 1939 - 1942. Unlike the programme recommended by the Defence Requirements Committee, which was aimed only at making good existing deficiencies, the programme of 1934 was a real expansion programme, and, as such, marked a turning point in the development of the Royal Air Force.

The Expansion of the Regular Air Force

The approval of Expansion Scheme 'A' naturally involved a rise in the requirements of all types of personnel, whether they be officers or other ranks, aircrew or ground staff.(3) So far as pilots were concerned, one thousand were required in addition to the normal annual output of three hundred. This was a large increase, and, in order to meet it, the Air Council decided to increase the entry of short service officers and airman pilots. Entries into medium service and the strength of permanent G.D. officers were also to be increased.(4)

The corresponding increase in the requirements of airmen for technical and administrative duties necessitated an addition of approximately 11,000 to the current strength of 27,200. Various means of securing the extra men were devised. The number of boys entering Halton as aircraft apprentices in August 1934, was increased, and ex-apprentice airmen were invited to re-engage for two years active list

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(1) The Committee was set up on 15 November 1933 to prepare a programme for meeting the nations' worst defence deficiencies. Cabinet 62(33) Conclusion 5.
(2) D.P.R. 82
(3) For details of the ultimate personnel establishment under each expansion programme see Appendix 1.
(4) A.M.O. A.190/34.

service (making 14 years in all) without any entitlement to pension.(1) From the standpoint of Service manning there were strong objections to this policy, particularly as at the end of 14 years the man had no pension; he was still without experience of civilian life and the higher age of entry therein would make it more difficult for him to get resettled. Extension of service was offered to fitters, riggers, wireless operators and armourers. The expansion programme was expected to involve the R.A.F. in a grave deficiency of fitters and it was therefore decided, as a temporary measure, to appoint ex-airmen in a civilian capacity.(2)

The Introduction of Boy Entrants

One of the most pressing manning problems of the Royal Air Force during the early 1930's was to find a means of producing armourers, wireless operators and photographers of a higher standard than then existed, particularly as it was from those trades that the supply of observers was mainly drawn. Men of better education and upbringing were required for those trades and the Air Council was compelled to consider new methods of obtaining them.

There was, at that time, a large number of candidates for aircraft apprentice training who could not be accepted because of the reduced apprentice entry and the enlarged flow of applicants. The Air Council decided to invite enough of the unsuccessful applicants for apprentice training to fill 200 vacancies annually as boy entrants for training in the trades of armourer, wireless operator and photographer. The boy entrants were to receive training for a period varying from twelve to fourteen months according to their trade, after which they would be enlisted for a period of nine years regular service.(3) The first entry of boys, in September 1934, totalled 155 and consisted entirely of boys who had applied in the first instance for entry as aircraft apprentices or apprentice clerks, but subsequent entries included some candidates who had not applied for apprenticeships, but had been nominated by Local Education Authorities, etc.

Expansion Scheme 'C' - May 1935.

Little progress had been made towards the implementation of Scheme 'A' when, in May 1935, Germany claimed that she had reached air parity with Great Britain and that her next aim was to equal the French first line of 1,500 - 2,000 aircraft. The British Government decided to accelerate and extend the expansion of the Royal Air Force and, in May 1935, Scheme 'A' was superseded by Expansion Scheme 'C'. Although the targets for the Fleet Air Arm and overseas establishments remained the same, that for the Metropolitan Air Force was increased to 123 squadrons by March 1937, an advance of two years in the target date. Consequently, new measures had to be introduced in order to obtain the additional 2,000 pilots and many thousands of ground personnel who were then required.

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(1) This was an entirely novel idea, the policy of the Services having hitherto been to re-engage for pension when service beyond twelve years was involved. (A.M. File 532407/36).
(2) A.M.O. A.190/34.
(3) A.M. File 305160/34.

In order to increase the strength of regular officers, the Air Ministry decided to offer extension of service up to the age of fifty to selected wing commanders, squadron leaders and flight lieutenants in the General Duties Branch. Medium service officers were invited to extend their service to eleven years on the active list followed by four in the Reserve, while short service officers were invited to extend their service to seven years on the active list followed by four in the Reserve.(1) Moreover, it was decided in September 1935 to waive the rule barring from consideration for permanent commissions in the General Duties Branch those short service officers who had completed four or more years on the active list, medium service officers and airman pilots who had remustered to their basic trade. Specialist courses were not at first available for any of these men who were given a permanent commission, but in May 1936 the grave shortage of specialist officers compelled the R.A.F. to provide such courses for them.(2)

The conditions of service for short service officers in the General Duties branch were revised in October 1935. From that date new entrants were appointed for four years active list service followed by six years in the Reserve. The active list period could be extended to five, six or seven years. This element of elasticity was introduced in order to enable the strength to be more easily equated to establishments, thus avoiding the surpluses which might have arisen at a later date as a result of the large entries made during the expansion period.(3)

Requirements of airmen also rose on account of Expansion Scheme 'C' and the recruiting programme was stepped up to 20,000 tradesmen and unskilled men who were to be enlisted by the target date, 31 March 1937. In order to cope with the enlarged flow of recruits that was expected, a bigger recruiting depot was opened at Victory House and arrangements were made to open ten more depots in provincial centres.

If the Royal Air Force was to avoid the disastrous effect on efficiency of the large influx of inexperienced men, it was essential that it should retain the services of as many skilled and experienced men as possible and attract skilled men back to the Service on short contracts. Only by making the fullest use of these two classes of men would it be possible to meet the increasing requirements of skilled tradesmen and instructors. It was accordingly decided to increase the proportion of skilled men who were allowed to re-engage and to invite both ex-apprentice and non-apprentice airmen to prolong their active list service. Selected airmen who were due for discharge to Service pension were invited to re-enlist for four years regular service. Apart from the all-important consideration of efficiency, each skilled man retained or re-enlisted represented a large financial economy as he was in substitution for a new entrant the whole cost of whose training was thereby saved.

An additional number of serving airmen were selected for aircrew training in order to meet the Expansion Scheme 'C'

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(1) A.M. File 411385/35.
(2) A.M. File S.36551.
(3) A.M. File 416191/35.

requirements of airman pilots. At the same time, it was decided to enter a new class of airman pilot direct from civil life on short engagements. This plan for the direct entry of airman pilots was short lived, however, for the Air Council decided in April 1937 that it should be abandoned, at any rate for the time being.(1) The Air Member for Personnel stated that although the direct entry airman pilots who had already entered the Service were doing fairly well and their work was satisfactory, they were not popular and the Service did not like them.

Requirements of airmen for the maintenance trades rose sharply under Expansion Scheme 'C' and it was quite impossible to turn out an adequate number of Fitters II to man the flights of all the new squadrons on the approved basis. The Air Council decided, therefore, to introduce two new temporary Group II trades - the Flight Mechanic and the Flight Rigger. Entry into the new trades was combined with that into the trade of mate, which was being supplemented with a large entry of airmen direct from civil life. During, or on completion of, the mate course, the most promising trainees were selected for a further course of about eight months in order to enable them to qualify as flight mechanics or flight riggers. The new tradesmen were supervised in flights by skilled fitter and rigger N.C.O.s.(2)

The annual entries of aircraft apprentices and boy entrants were increased in 1935 from 644 and 155 to 1,469 and 476 respectively. The number of apprentices then under training was much below normal for the number of squadrons, as the number of skilled men available when the Fitter I - II - Mate Scheme had been introduced in 1932 had been regarded as sufficient to enable requirements to be met for the next few years on a reduced scale of apprentice training.(3) When looked at from the standpoint of the 1939/45 war it was most unfortunate that this decision was taken; had it not been taken, there would have been many more apprentice trained technical men to form the backbone of war time expansion.

Expansion Scheme 'F' - February 1936

Information received during 1935 indicated that, although Germany was not likely to be ready for war before 1939, her preparations for war constituted a growing threat which could not be ignored. The Air Staff accordingly drew up a new and better expansion programme, Scheme 'F', which was approved by the Cabinet in February 1936. Expansion Scheme 'F', which was due for completion by March 1939, was the only scheme of the series to run its full course. The target was 124 squadrons and the bomber striking force was to be strengthened by the replacement of light bombers by heavier types of greater range and higher performance.

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(1) E.P.M. 77, 13 April 1937. The entries to training as airman pilot between April 1935 and April 1939 were as follows:-

	Direct Entry	Serving Airmen
1.4.35 - 31.3.37	357	510
1.4.37 - 31.3.38	-	400
1.4.38 - 31.3.39	-	400

(2) A.M.O. A.146/35.
(3) A.H.B./V/5/1.

The development of the regular Air Force to Scheme 'F' demanded the intake of over 4,000 pilots and 1,264 observers in the four years 1936 to 1939 inclusive. Requirements of airmen for ground duties rose proportionately and the need to raise the re-engagement quota was discussed. It was urged that in existing circumstances it would be unwise to lose the services of any skilled and experienced airman and that re-engagement for pension should therefore be offered to all suitable men. Against this proposal it was pointed out that unlimited re-engagement would have a serious effect on promotion prospects, would materially affect the provision of an adequate reserve and would lead, ultimately, to an unduly heavy pension vote. The Air Council therefore decided to pursue a middle course and to restrict re-engagements to such numbers as were clearly essential for the efficiency of the Service. The extent to which additional re-engagements were needed varied, but in the fitter group the normal quota of 25 per cent was raised to 60 per cent for men due to leave the Service before 31 March 1939 and was gradually reduced for men leaving thereafter until the normal quota was reached for men due to leave after 31 March 1941.(1)

Expansion Scheme 'H' rejected

Information which reached the Air Staff in the autumn of 1936 suggested that Germany was planning an even greater first-line air strength. Proposals were, therefore put forward for a new expansion programme, Scheme 'H', which aimed at raising the R.A.F. first-line strength from the 1,700 aircraft, planned under Scheme 'F', to over 2,400 by April 1939. Although Scheme 'H' was rejected by the Cabinet because of the increasing difficulty of the aircraft supply problem, the Chief of the Air Staff doubted, also, whether the additional personnel, particularly pilots and apprentices, who would be required under Scheme 'H', would be easily obtainable, in view of the fact that, in order to meet their commitments, the R.A.F. would require 10 per cent of the total annual output of the nation's public and secondary schools.(2) Nevertheless, the Cabinet agreed in February 1937 to approve such measures as would enable Scheme 'H' to be implemented at short notice if necessary. These measures included the recruitment of additional pilots and skilled tradesmen, so that, although the expansion of the Royal Air Force proceeded generally on the lines of Expansion Scheme 'F', it was an enlarged Scheme 'F' so far as personnel was concerned, and involved increases in practically all trades.

The Supply of Skilled Tradesmen

In order to meet the increased requirements of skilled tradesmen, it was suggested in September 1937 that re-engagement should be offered to all those airmen who had satisfactory records and were due to leave the Service during the next two or three years. The reason for this proposal was the vital necessity for retaining in the Service all skilled and experienced men in view of the fact that the number of airmen and boys was then approximately double that of two and a half years previously. Moreover, experience had shown that an offer of re-engagement was far more attractive than one of extension of service. An abnormal number of

(1) A.M. File 519422/36.
(2) E.P.M.66, 19 January 1937.

apprentices was beginning to leave Halton with the result that there would soon be an excessive number of junior N.C.O.s. Dilution by flight mechanics, flight riggers and mates was making skilled supervision and a stiffening of skilled men of long experience even more necessary. The Air Member for Personnel emphasised that the world situation was deteriorating and that readiness for war should be seriously considered.

It had been found that, owing to the favourable opportunities for obtaining civilian employment, the numbers of suitable airmen applying for re-engagement did not exceed the 60 per cent quota in the majority of trades. The effect of an unlimited offer of re-engagement, from the point of view of both strength and careers, was, therefore, expected to be negligible, but, in view of the further expansion that was contemplated, the Air Council were reluctant to lose the services of even one trained and experienced man who might wish to re-engage. They accordingly sought and obtained Treasury approval for the re-engagement of all suitable airmen who would have completed twelve years service by 31 March 1942.

It was proposed in March 1938 that, in view of the increased power, speed and complexity of modern aircraft, there should be a re-organisation of the airmen employed on the maintenance and repair of aircraft engines and airframes. It was no longer practicable to employ mates on the scale which had been contemplated under existing policy and there was, in fact, no work on which they could be employed which could not be done equally well by aircrafthands. The Air Council agreed to the following organisation which was announced to the Service in December 1938.

The temporary trades of flight mechanic and flight rigger were placed on a permanent footing and airmen of those trades, supervised by Fitters I, became responsible for flight maintenance. The aircraftman posts in squadron workshops were, in future, to be filled by Fitters II(A) and Fitters II(E) recruited from apprentices, and the N.C.O. posts in workshops were to be filled by Fitters I. A proportion of the aircraftman posts in repair depots was to be filled by Fitters II(A) and II(E), but the bulk of the personnel, including all the N.C.O.s, would be Fitters I. The introduction of the Fitter I produced some difficulty in providing corporals for the N.C.O. posts.

Fitters I were normally to be drawn from Fitters II(A) and II(E) who had received a further twelve months course to enable them to carry out maintenance and repair work on both engines and airframes. The mate disappeared and was replaced by additional aircrafthands who were provided to perform such work as did not require the services of a skilled man.(1) The change-over to the new organisation was naturally slow and it had not been completed when war broke out.

Expansion Scheme 'L' - April 1938

After the rejection of Expansion Scheme 'H' by the Cabinet, Scheme 'J' was drawn up, but was referred back to the Air Staff in December 1937 for revision and the preparation of a less ambitious programme. Various cuts and economies were made and the modified programme was known as Expansion Scheme 'K'. The Air Staff complained, however, that Expansion

(1) A.M.O. A.442/38.

Scheme 'K' did not represent even the minimum insurance which was considered necessary in the Metropolitan Air Force and, two days before it was due to come before the Cabinet, Germany annexed Austria. Scheme 'K' was then swept aside in favour of a more realistic expansion scheme, Scheme 'L', which was approved by the Cabinet on 27 April 1938 and aimed at producing a front line of 2,400 aircraft by early 1940.

With the approval by the Cabinet of Expansion Scheme 'L', the Royal Air Force entered a phase of intensified expansion and preparation for war. The principle of non-interference with civil industry, which had hitherto barred defence measures more in keeping with the situation, was abandoned, and the Cabinet decided that double shifts could be worked in aircraft factories and in factories diverted to producing war requirements.(1) The Air Staff felt that even Scheme 'L' fell short of what they regarded as the minimum level of safety. Development even to Scheme 'F' was behind schedule but the Air Staff agreed that little could be done to improve the situation within the next few months.

Recruiting and Training Problems in 1938

The recruiting programme for the financial year 1937/1938 was successfully completed with the exception of fitters and metal workers, and altogether 764 skilled and 10,486 semi-skilled and unskilled recruits were obtained for regular service. The difficulty in recruiting skilled fitters, metal workers and turners was ascribed to the high demand for similar skilled tradesmen by civilian firms, especially by the rapidly expanding aircraft industry.(2)

The provisional recruiting programme for the financial year 1938/1939, on the basis of Expansion Scheme 'K', had been 15,000 men, but with the adoption of Expansion Scheme 'L' the figure leapt to 29,000.. This was due not only to the increased number of aircraft that were planned but also the growing complexity of the maintenance that was required for modern aircraft. It was emphasised that the regular personnel requirements to meet Expansion Scheme 'L' were the minimum possible and were dependent upon the availability of an adequate trained reserve.

The Secretary of State for Air, Sir Kingsley Wood, inaugurated in June 1938 a new nation wide recruiting appeal for the Royal Air Force on the recommendation of the Publicity Committee. He said that, owing to the recently increased programme for strengthening the country's air defences, the Royal Air Force would require more than 31,000 men and boy recruits during the current year. This requirement was a record number for any year in the history of the Royal Air Force, and was about fifteen times the number entered in an average year before 1935. The total requirement of 31,000 consisted of 2,100 pilots, 550 observers, nearly 26,000 tradesmen and unskilled men, and some 3,000 boys.(3)

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(1) Cab.15(38).
(2) A.M. File 751780/38.
(3) A.M.C. No. 5614. In fact, during the financial year 1938 - 1939, 28,759 tradesmen (1,922 skilled and 26,837 semi-skilled and unskilled) and 3,434 apprentices and boy entrants entered the R.A.F. (A.H.B./III/39).

The training expansion envisaged for pilot and crew training put considerable additional strain on the Service as a whole. Requirements for Scheme 'L' were 2,500 pilots (per annum), 2,069 observers, 3,867 W/T operators and 554 air gunners. The instructor position was so serious that in April 1938 it was proposed to employ as instructors pilots who had just finished their own training. Owing to this difficulty in providing instructors, only four new Flying Training schools could be opened instead of the eight that were needed to produce the required number of pilots.(1) The first line squadrons had already given up so many of their experienced pilots for instructor duties that operational efficiency was suffering, and a temporary deficiency of 720 pilots had therefore to be accepted.

The shortage of instructors for tradesmen was equally serious. Seven hundred were required for training skilled tradesmen and it was vital to retain in the Service every single man who could be used for this purpose. About 1,000 N.C.O.s were due to leave the Service in 1938 and the Treasury agreed in May that they should all be offered re-engagement. Although the recruiting problem as a whole was serious the Air Member for Personnel declared in June 1938 that he was more concerned about the difficulty of obtaining the necessary number of suitable instructors than about recruits.(2)

The increased population of trade trainees resulting from Scheme 'L' was expected to last well into 1939 but it was hoped that no new training units would be needed, requirements being met by the expansion of existing and authorised units. One of the most acute problems arose over flight mechanic and flight rigger trainees whose strength was expected to rise to 4,000 more than could be accommodated in existing units. Wireless Operator trainees presented an almost equally serious problem as their numbers were expected to rise to over 5,000 instead of just under the 2,000 for whom facilities were then available. In their case the difficulty was solved temporarily by reducing the training course from 9 to 6 months thus providing accommodation for an additional 1,000 trainees. Recruits training was also a problem as the number of recruits was expected to rise to over 7,000 by October 1938 while there was accommodation for only 3,500. It was decided to house the overflow in hutments or, if necessary, in tents.(3)

Review of the Equipment and Accountant Branches

The composition of the Equipment and Accountant Branches was reviewed in 1938 in an attempt to find the best means of providing the 840 Equipment and 373 Accountant Officers who were required under Scheme 'L'. Under existing policy a large number of retired officers were employed in these branches in addition to the permanent cadre and commissioned warrant officers, but by 1938 this policy of employing so many retired officers was felt to be no longer safe or sound. Apart from the fact that the supply of suitable retired officers was drying up, information from Commands suggested that the majority of them, owing to their having reached the age when their energy tended to flag, were not only unsatisfactory in peace but would

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(1) A.H.B./V/5/10.
(2) E.P.M.127.
(3) A.H.B./V/5/10.

be quite unfitted for the increased responsibilities which would fall upon them in war.

The solution was felt to lie in the gradual substitution of retired officers by short service officers, and the Treasury agreed to this change in policy in June 1938 for the Equipment Branch and in February 1939 for the Accountant Branch. Although the recruitment of retired officers for these duties ceased forthwith, it was recognised that the process of building up strength with short service officers would inevitably be a gradual one and that the employment of retired officers would have to continue for some time.(1)

The Expansion of the Reserve and Auxiliary Forces

When Expansion Scheme 'A' was approved in July 1934, the Air Council decided to take immediate steps to build up the reserve of pilots. They therefore agreed to increase the intake of civilians for ab initio reserve flying training so as to produce an additional fifty trained pilots during the year. For reasons of economy, and because experience had shown that it would not be possible to increase the intake of officer reservists without lowering the quality, it was decided that, in future, all direct entry reserve pilots would serve in the first instance as airman pilots and would be enrolled in a new class of the reserve, Class 'F'. The only exceptions to this rule were proficient members of University Air Squadrons who continued to be appointed direct to the Reserve of Air Force Officers. A number of civil pilots, in addition to the ab initio trainees, were to be recruited into Class 'F' as airman pilots. After three years service, a limited number of Class 'F' reservists would be commissioned in the R.A.F.O. Class 'E' airman pilots were also eligible for commissioning. As a result of these changes, a total entry of some 160 officers and airman reserve pilots was expected for 1934.(2)

By the end of that year the Air Council felt that they could no longer support their previous estimate, made in 1931, that a reserve of 1,200 pilots was adequate. Nor were they prepared any longer to envisage a temporary but avoidable deficit. They decided that an establishment was needed for 1,500 effective reserve pilots who were to be recruited and trained as quickly as practicable. Even if the recruitment of direct entry pilots were intensified in an attempt to achieve this goal it was unlikely that a strength of 1,500 could be reached in less than three years. Treasury approval for this increased establishment was given in January 1935.

So far, plans for the expansion of the Air Force reserve had been confined to the reserve of pilots. The strength of Class 'E' of the Reserve had been well below the required level in November 1933, and the Officer i/c Records had emphasised the necessity for early action to build up the reserve, especially in the fitter and rigger trades where the deficiencies were particularly serious. No practical steps to remedy the situation were taken, however, until August 1935, when it was decided that all regular airmen should be invited to join the reserve on completing their active list service, and that all

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(1) A.M. Files 774577/38 and 848513/38.
(2) A.M. File S.33193.

reservists should be invited to re-engage in the reserve. It was also agreed that reservists could be accepted even if they were fit for home service only as it was anticipated that there would be a considerable amount of work which could be done by men of low medical category. In the following year, ex-airmen of all but a few unimportant trades were invited to enlist in the Class 'E' Reserve from civil life.(1)

Reserve Requirements under Scheme 'F'

The sketch estimate for 1936 provided for an intake to the Reserve of 80 pilots with civil licences and 22 ab initio trainees during the year. Before the estimate had reached its final form, however, the Defence Requirements Committee (D.R.C.) had recommended in October 1935 the provision of reserve aircraft on a scale which would entail a substantial enlargement of the pilot reserve. To build up the reserve of pilots to the required level an annual entry of 800 trainees would be needed during the years 1936 - 1938 if the date of war readiness was taken as the beginning of 1939.(2) The Air Member for Personnel advocated going ahead with the recruitment of the extra pilots, but the Secretary of State was unwilling to increase the total of the Air Estimate, which was felt to be very large already, and to include in the normal Estimate items which were dependent on the Government's acceptance of the Defence Requirements Committee's Report. It was therefore agreed, as a stopgap measure, to provide for another hundred direct entry reserve pilots in the 1936 Estimate, thus making a total entry of 400. The entry of these men would not raise the strength above the authorised figure of 1,500 and it was decided to bear the extra cost involved by adjustments to other Votes.(3)

The Government's acceptance of Expansion Scheme 'F' in February 1936, meant that plans would have to go ahead for the provision of the extra reserve pilots recommended by the D.R.C. in the previous October. It was agreed that, in order to attract enough recruits, the continuous period of training which had proved such a stumbling block to the R.A.F.O. would have to be replaced by more attractive arrangements, and, consequently, when the Royal Air Force Volunteer Reserve was formed later in the year it embodied a completely novel training system.

The increasing attention that was now being paid to the provision of adequate reserves of personnel behind a rapidly expanding regular Air Force was one of the outstanding features of Scheme 'F'. Requirements of reserve personnel were based on the maintenance of the Scheme 'F' force at full strength during the months of war which would elapse before war entrants could be made available. The reserve requirement consisted of two parts:-

(a) the increase in strength required on mobilisation, mainly in order to set going the war training scheme, and

(b) the personnel required to meet war wastage.

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(1) A.M. File S.27033.
(2) A.M. File S.35912.
(3) A.M. File S.34913.

In the case of tradesmen, the former was the principal component of the requirement; in the case of aircrew, the latter.

The provisional reserve airmen requirements for Scheme 'F' on this basis were as follows: pilots 5,000; observers 2,000; wireless operators/air gunner 3,200; other air gunners 1,200; tradesmen 15,000; aircrafthands 10,000. Of the pilots, 1,200 would be ex-regulars and the balance would be direct entrants in the Volunteer Reserve.

The Formation of the Royal Air Force Volunteer Reserve

The Royal Air Force Volunteer Reserve was formed in August 1936(1) with the object of providing ab initio training for the vastly increased numbers of pilots who were required for reserve service. It was designed to appeal to the young men of Britain without any class distinctions and was to be built up into a 'Citizen Air Force as a real second line of defence behind, and closely affiliated to the Regular Service.'(2) Volunteers were enlisted as airman pilots and promotion to commissioned rank, based solely on merit, was offered to airmen at or after the age of 21. Because a long period of continuous ab initio training had proved a deterrent to reserve recruiting in the past, R.A.F.V.R. training was confined to week-ends and evenings and to 15 days annual continuous training. The training organisation was novel in that it was based on a network of civil aerodromes with each of which was associated a town centre. The latter was provided as a centre for the ground instruction of the volunteers and was also intended to be a focal point for their social activities.

The original plan for the R.A.F.V.R., based on Scheme 'F' requirements, was the recruitment of 800 pilots in each of the years 1936, 1937 and 1938, but the Reserve made a late start, recruiting did not begin until January 1937, and this programme had therefore to be modified. Training was at first based on twelve of the original civil schools which were maintained by the aircraft industry for the training of regular and reserve pilots, and in 1937 ten additional aerodromes began R.A.F.V.R. training. It was hoped that by January 1939, thirty-three aerodromes and twenty-six town centres would be providing training for a population of 2,500 Volunteer Reservists.

It was contemplated that an aircrew, as opposed to a pilot's section would also be formed in the R.A.F.V.R. Mention of this was made in the Memorandum on the Air Estimates for 1937 but it was not until March 1938 that the Treasury authorised the formation of such a section. It was also intended eventually to form a ground section into which civilians would be entered for training as officers in equipment, medical, engineering, signals and other specialist duties if and when the need arose. The Medical Branch was formed in October 1937 and the Equipment Branch in the following January. An Administrative and Special Duties Branch was formed later in 1938 and Dental and Meteorological Branches were added in 1939.

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(1) A.M.O. A.201/36.
(2) A.M. File S.37628.

Report on Reserve Requirements (Airmen) - July 1937

In July 1937 was issued the Report of the D.P.S. Committee on Reserve Requirements (Airmen) which had been convened to make recommendations as to the strength of the Reserve to be maintained in peace and the methods by which the necessary numbers might be obtained.(1) The position of the Royal Air Force on mobilisation differed from that of the Navy and Army in that it had to be anticipated that the period of maximum and most intense effort would start immediately on the outbreak of war and the Committee therefore proceeded on the assumption that the whole of the personnel needed to bring the Royal Air Force up to mobilisation standard must be immediately available. They took as a basis for their recommendations war requirements calculated on the current mobilisation scheme and the ultimate peace establishments forecast for Scheme 'F'. On this basis they estimated that an effective reserve of 24,800 airmen was needed, but that the actual strength necessary if the existing rate of non-availability continued was 36,750. The Committee were impressed with the high rate of non-availability which amounted to 43 per cent of the total strength.

The Committee noted that the nominal strength of the Class 'E' Reserve was only 9,227 and was not expected to reach a higher nominal figure than 16,500 by April 1942. If the existing rate of non-availability continued(2) this would mean an effective reserve of only 9,400 in April 1942 compared with a requirement of 24,300. The Committee therefore made the following recommendations for increasing reserve strength:-

(a) Steps should be taken to enlist as many suitable ex-airmen as possible in Class 'E' Reserve.

(b) Deficiencies persisting over the next few years should be made good by the direct enlistment of civilians into some sort of reserve.

(c) The principle of dilution on mobilisation by civilians, including women in suitable units, should be accepted in the trades of Cook and Butcher, Clerk (G.D.) and Clerk (Accountant), provided that an effective scheme could be worked out to ensure that the civilians would be available when required.

(d) The question of the removal from the paid reserve of reservists who would not be available on mobilisation, particularly those in the less skilled trades, or, preferably, of securing that all such reservists should be made available, should be explored.

The Formation of the R.A.F. Ex-Officers' Emergency Reserve

The Royal Air Force Ex-Officers' Emergency Reserve was a private organisation, officially recognised by the Air Council, which was formed early in 1938 under the presidency of Lord Trenchard. Its purpose was to earmark for service in an emergency former officers of the Royal Naval Air Service, the Royal Flying Corps and the Royal Air Force who were too old

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(1) A.M. File S.41825.
(2) Only about 55 per cent of Class 'E' Reservists were available for recall. The recall of the remaining 45 per cent was precluded by the nature of their civilian employment.

for service in the normal reserve, and to give them a measure of training which would enable them to be employed in an emergency in technical and mechanical posts or on equipment, administrative, intelligence, cypher, censor, liaison and linguistic duties.(1) Members were required to give an honourable undertaking to accept service with the R.A.F. when called upon to do so.

Strengthening the Auxiliary Air Force

Although the recruitment of officers was entirely satisfactory in many A.A.F. squadrons, overall recruiting was never up to requirements, even when the number of squadrons was small. No squadron was ever up to full strength in all ranks, and there were few re-engagements.(2) Auxiliary Air Force squadrons were regarded as a part of the first line strength, and the recruiting position, especially as regards officers, was such as to cause serious concern in 1937. Pay and allowances were insufficient to cover the out-of-pocket expenses of officers and airmen, the annual cost of belonging to an A.A.F. squadron being between £30 and £50 to an officer and about £20 to an airman. Such expenses were due, in the main, to the large number of attendances which A.A.F. personnel were required to make for training and the distances which they had to travel without adequate financial compensation. Financial considerations were the main reason for low A.A.F. recruiting and for attracting potential recruits to the newly formed R.A.F.V.R. for which more generous terms had been authorised. A number of A.A.F. members also transferred to the R.A.F.V.R. A number of other factors in addition to finance influenced the rate of A.A.F. recruiting. These included the demands made on the spare time of personnel in carrying out the training expected of them, which was more than was laid down in regulations; the shortage of aircraft for training purposes which restricted the recruitment of pilots to full establishment; insufficient publicity as compared with other branches of non-regular service; and the expense of meeting the extra premiums required by insurance companies to cover flying risks.

In an attempt to stimulate A.A.F. recruiting and to remove the growing sense of injustice experienced by many officers and airmen of the A.A.F., a committee was set up under the chairmanship of the Under Secretary of State for Air in January 1938 to consider the recruitment, training and conditions of service in the Auxiliary Air Force.(3) At that time, the A.A.F. consisted of eleven Bomber, five Fighter and three Army Co-operation squadrons, a total of nineteen. The total personnel strength of the Bomber and Fighter squadrons was 237 officer pilots, 49 other officers and 1,985 airmen. These figures represented only 51 per cent of the peace-time establishment of officers and 77 per cent of that for airmen. In view of the role which the squadrons would be expected to play in the event of war, it was a most unsatisfactory position.

The Committee issued its report in the following April and, as a result of its recommendations, the conditions of

(1) A.M. File S.43937.
(2) A.M. File 578546/36.
(3) A.M. File 753869/38.

service were greatly improved and the Auxiliary Air Force was reorganised on a more realistic basis. With a view to improving the rate of recruitment and re-engagement of personnel for the A.A.F., the Committee recommended that the emoluments of officers and airmen should be increased; that aircraft for A.A.F. squadrons under the approved expansion scheme should be supplied up to establishment with the least possible delay; that arrangements should be made to provide additional publicity; and that a reasonable measure of assistance from public funds should be given towards the expense of private insurance against accident and death, undertaken by individuals accepting flying service in the non-regular Forces. The Committee recommended that personnel establishments, which then included both trained personnel and personnel under training, on the basis that the squadrons were both operational and training units, and were thus higher than war establishments, should be related to the numbers which would be required to enable the squadron to function in war. The Committee considered the current policy whereby pilot duties in auxiliary squadrons were carried out wholly by commissioned officers. The Auxiliary Air Force differed in that respect from the R.A.F. where airman pilots occupied a definite place in the establishment of all squadrons except Army Co-operation squadrons. The Committee recommended that airman pilots should be introduced into A.A.F. squadrons. This change was opposed strenuously by many A.A.F. squadrons. Airman pilots were to be drawn both from airmen already serving in A.A.F. squadrons and from volunteers entering the A.A.F. specifically for pilot duties.

In the light of the recently approved organisation, which involved the grouping of all A.A.F. squadrons with the appropriate regular formations and the consequent disappearance of the distinctive Auxiliary Group, the Committee considered the need for the appointment in the Air Ministry of an officer of senior rank, for the purpose of effecting liaison in Auxiliary Air Force matters. As a result of their consequent recommendations, an A.A.F. officer was appointed Director of the Auxiliary Air Force in the autumn of 1938.(1) He was responsible to the Air Council for liaison between the Air Ministry, Groups, Commands, A.A.F. squadrons and Territorial Army and Air Force Associations, but he was given no executive powers.

Reserve Requirements under Scheme 'L'

The personnel requirements of the Royal Air Force Volunteer Reserve to meet Scheme 'L' were double those which had been needed to meet Scheme 'F'. Seven thousand pilots were needed instead of 2,400 and 6,750 wireless operators instead of 3,200. Observer requirements dropped at first to 1,500 but later rose to 3,050 on account of a decision to to add observers to all crews. A thousand air gunners were also needed. In order to provide the additional training facilities that were needed, it was proposed to expand to the maximum the 33 Scheme 'F' aerodrome centres and to establish an additional 25, making a total of 58. The number of town centres was to be increased to 55.

The R.A.F.V.R. was however, in no position to implement Scheme 'L' in April 1938. Its total trainee population consisted of approximately 1,300 pilots, there being

(1) A.M. File 699153/37.

no wireless operators or air gunners under training as yet. Only 22 of the 33 aerodromes planned for Scheme 'F' were in operation and few town centres were open. The delay in providing the town centres was due mainly to the slow and circuitous procedure of the Office of Works which acted as agent in acquiring and conditioning the premises. The average time taken to provide a town centre was 9 months, and by the spring of 1938 only 17 had even been selected. R.A.F.V.R. progress had also been slowed down by a shortage of instructors, and, although good pay was being offered, the position showed little sign of improvement in the spring of 1938.(1)

A Director of Volunteer Reserve Expansion (D.V.R.X.) was appointed in August 1938 to supervise the early stages of R.A.F.V.R. expansion.(2) He was attached to the Department of the Air Member for Supply and Organisation but also had direct access to the Under Secretary of State. The post was filled by the A.O.C. of No. 26 Group, which was responsible for the R.A.F.V.R. At first the executive work of the new Directorate was performed by a number of branches in the Air Ministry, but a lack of co-ordination between them led to D.V.R.X. becoming an executive Directorate in July 1939. The relationship of D.V.R.X. to the Volunteer Reserve was then the same as that of D. of O. to the Regular Service.

Manning the Balloon Barrage

The task of manning the Balloon Barrage was entrusted to the Auxiliary Air Force, and the recruitment of personnel for duty in the newly formed Balloon Barrage squadrons began in the London area in May 1938.(3) Volunteers accepted no liability for service outside the United Kingdom and enjoyed the same privilege as other A.A.F. personnel of not being required to serve with any but their parent unit. This privilege was to cause serious difficulty and discontent during the war years when the balloon barrage was thinned and increasing numbers of women were employed in lieu of men on balloon duties. It also caused severe manning embarrassment and a waste of manpower.

Officers were appointed in the A.A.F. for balloon duties for a period of five years followed by five in the A.A.F. Reserve of officers, and airmen were enlisted for a period of four years. It was intended to employ only older men on balloon duties and the age limits were, therefore, 32 - 50 for officers and 38 - 50 for airmen although younger men could be accepted if they were physically unfit for ordinary enlistment in the A.A.F.

In September 1938, in an attempt to stimulate recruiting which had so far been very slow, and partly because of the belief that older men would be unable to withstand the rigours of the employment, the age limit for balloon duties was lowered to 25. At that time only 55 officers and 659 men were borne against an establishment of 120 officers and 5,380 airmen, but lowering the age limits, and the Munich crisis, had the desired effect and within seven weeks strength had increased fourfold. In January 1939 recruiting for Balloon Units was extended to the provinces and the establishment was accordingly raised. Recruiting proceeded satisfactorily in the first half of 1939 and it was found possible in June to raise the lower age limit to 30. On the outbreak of war there were approximately 16,400 A.A.F. officers and airmen in balloon squadrons.

(1) E.P.M. 101 (38).
(2) 133rd Progress Meeting.
(3) A.M. File 932938/39.

Formation of the Civil Air Guard

A scheme was drawn up early in 1938 for using the facilities of the civil flying clubs to train men and women, aged between 18 and 50, who would be willing to offer their services to the R.A.F. in an emergency. The volunteers were to be enrolled in the Civil Air Guard, an entirely civilian organisation which was to consist of units attached to the Light Aeroplane Clubs. Air Guard members were required to give an honourable undertaking to accept service in any capacity or rank in connection with aviation if called upon in emergency They received no bounty or other payment, the sole financial inducement to join being that they would receive flying training at a reduced cost.

Although the Civil Air Guard scheme was essentially one for the clubs to run, a commission was set up under the chairmanship of Lord Londonderry, a late Secretary of State for Air, so that there might be a central organisation competent to guide the clubs in their Air Guard activities and to make contact with the Air Ministry on general questions. The Air Ministry agreed to make grants-in-aid to the clubs if they formed a section of the Civil Air Guard and undertook to charge members reduced rates for their flying instruction.

The primary aim of the Civil Air Guard was to build up a reserve of at least partly trained pilots but it also aimed at maintaining in existence the light aeroplane club organisation with a view to using in an emergency the facilities which it provided. It was also hoped that it would stimulate popular interest in aviation and create air-mindedness on a greater scale then hitherto.

The scheme was launched in July 1938 and met with an immediate and enthusiastic response.(1) Training began in September but, as with the regular air force and other branches of the reserve, the main deterrents to the growth of the Civil Air Guard soon proved to be the lack of instructors and training aircraft. Thirty-six thousand applications to join the Civil Air Guard had been received by the end of 1938(2) and it was then decided to accept no further applicants, except those with previous flying experience, for the time being, although a waiting list was to be compiled. There were already 1,400 Civil Air Guard members holding 'A' licences and 3,800 were under training.

Report of the Personnel Reserve Committee - August 1938

The Personnel Reserves Committee was set up by Lord Swinton in April 1938 with terms of reference which entailed a full survey of the requirements in reserve personnel necessary to bring Royal Air Force peace establishments up to war strength on mobilisation and to replace wastage during the early months of war until such time as sufficient numbers of adequately trained war entrants were available. Lord Swinton directed the committee to approach the problem of meeting these requirements in an atmosphere of war emergency, coupled with what was practicable in ad hoc peace time enrolment. He emphasised that

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(1) A.M. File 882205/39.
(2) A.M. File S.49153.

as, in existing circumstances, it would be impracticable to give reservists ideal training in peace, plans should aim at the enlistment of those types of men, and to some extent women, who could, with a minimum of training, readily adapt themselves to the particular employment they would be required to undertake in war.

In surveying the field of reserve requirements under Scheme 'L', the committee considered that the purpose of their enquiry would best be served by an examination of the position as at 1 April 1939. The deficiencies disclosed were of the following order:-

Officers G.D. and Airmen Pilots	3,000	8,700
Observers	2,500	
Wireless Operators/Air Gunner	3,200	
Tradesmen		
Fitter Group	11,000	36,800
Armament "	1,054	
Signals "	4,171	
Instrument "	430	
Balloon "	6,000	
Other trades including A.C.H.s	14,145	
	Total	45,500

The Committee reported that, in view of the fact that plans for a large expansion of the Volunteer Reserve to absorb more pilot trainees and to recruit and train crews were being considered by the Air Council, they did not feel that they could add to the proposals already made for the acceleration and completion of this programme.

Their examination of the reserve tradesmen position disclosed that immediate measures would be necessary to relieve a situation which gave rise to increasing anxiety. The problem of meeting tradesmen deficiencies, especially in the highly skilled trades, was a difficult one as there was practically no effective or material source of supply beyond the ex-regular, a source which had virtually dried up for the time being with the expansion of the active list. It was ascertained from the Officer-in-Charge, Records, that during the preceding nine months a total of 20,000 ex-airmen had been invited to enlist in the reserve but only 2,000 of them had enlisted.(1) The possible reasons for this were examined and it was felt to be largely due to the men's inability or unwillingness to accept the liability for annual training. It was decided, therefore, as a purely emergency measure to operate over a period of two years, that ex-airmen (including pensioners) should be invited to join Class 'E' of the Reserve for a period of 4 years without a training liability. The conditions of service were published in July and August 1938.(2) One result was that certain reservists who had been offered a bounty in 1929 to induce them to accept premature discharge from the reserve were now offered a bounty to rejoin.

Assuming a good response to the scheme for increasing the entry into Class 'E', there still remained a substantial tradesmen deficiency, possibly amounting to some 12,000, to be made

(1) A.M. File S.44870.
(2) A.M.O.s 274/38 and A.322/38.

good. The Committee found that there was a source of potential tradesmen recruits to be tapped in those civilian trades, skill in which could be usefully adapted to serve R.A.F. requirements, and that, provided the difficulties of basing the training on regular units could be overcome, the way would be clear for the creation of a section of the R.A.F.V.R. for:-

(a) Fitters, Riggers and other skilled tradesmen.

(b) Minor tradesmen and aircrafthands.

The Committee also recommended the provision, as a matter of urgency, of R.A.F.V.R. personnel for duties in Operations Rooms. Approximately 700 men were required for these duties. Such a scheme had been approved by the time the Committee's report was issued and arrangements were then in hand for its immediate operation. Units of Fighter Command were to undertake the recruitment and administration of these Volunteer Reservists until such time as the R.A.F.V.R. organisation was in a position to assume the responsibility.

Formation of the Civilian Wireless Reserve

The Committee on Personnel Reserves also recommended the immediate formation of a civilian wireless reserve for ground duties, which body was later to be absorbed in the ground section of the R.A.F.V.R. The responsibility for the recruitment and administration of the reservists was to be vested in the Directorate of Signals until the R.A.F.V.R. was ready to assume it.

The Civilian Wireless Reserve (C.W.R.) was designed to tap the supply of amateur radio operators and to constitute a practical, ready made reserve of wireless enthusiasts who would require a minimum of training to fit them to R.A.F. communication requirements. The age limits were 18 to 55, and membership was open to proficient amateur wireless operators, preferably holders of the G.P.O. Transmitting Licence or Experimental Licence. A Headquarters was set up at Air Ministry from which the reservists were organised into geographical groups, and exercises were carried out with headquarters in control. In November 1938 an experimental section of the C.W.R., consisting of selected experts in electrical engineering, was formed to deal with electrical and radio problems submitted to them by technical branches of the Air Ministry.(1)

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The period from July 1934 to September 1938 was, for the Royal Air Force, one of expansion on an unprecedented scale, in which personnel establishments were more than trebled(2) and strength was more than doubled.(3) Coming, as it did, after years of stringent financial economy, the task of recruiting and training the thousands of additional men who were required presented a real problem to the Air Ministry. In order to attract and enlist the necessary numbers there had to be a substantial growth in the recruiting organisation which

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(1) A.M. File S.44598.
(2) See Appendix 1.
(3) See Appendix 2.

resulted in a steady rise in the recruiting staff and in the publicity expenditure during the period 1934 to 1938. The staff (including clerical staff) rose from 18 to 285 during those years while the annual publicity expenditure increased from £550 to £66,000.

Owing to the excessive financial stringency which had been exercised during the preceding years of national depression, the bases on which to plan expansion were poor. Training facilities had been kept to a minimum and the effect of this was felt throughout the years of expansion in the shortage of highly skilled men for employment as instructors or on supervisory duties, in the lack of schools capable of absorbing the increased numbers of trainees, and in the lack of training aircraft. This economy with regard to the Armed Forces had been applied to the Reserves as well as to the Regular Forces, and had been dictated by political as well as by financial reasons. It persisted for some time after expansion began, and as late as the autumn of 1937 Scheme 'J' had to be abandoned on account of the heavy cost which its implementation would have involved. In fact, until April 1938, the size and scope of each successive rearmament programme were determined mainly by financial considerations. In planning expansion, also, there was a tendency to adopt measures which were designed rather to provide a career for airmen than to ensure readiness for war. Then came Scheme 'L', the principle of non-interference with normal trade was swept aside, and from then onwards the rate of expansion was determined largely by industrial capacity. Events were to prove, however, that this belated earnestness came too late to enable a really effective, well trained force to be built up by the time war was declared in September 1939.

The story of pre-war personnel expansion was one of short term measures which were decided in the light of immediate requirements with little regard to their long term effect on the efficiency and contentment of the Service, so that their adjustment to meet permanent requirements presented a problem of great complexity. In addition to recruiting more officers and airmen each year, the Air Force re-engaged or extended the service of many officers and airmen. The latter were particularly valuable in that they provided a leavening of highly trained and skilled men in a force which contained a growing proportion of trainees and men who had had insufficient time since completing their training to become really experienced and proficient in their trade.

The retention on the active list of these trained and skilled personnel was invaluable to the regular Air Force but it made doubly difficult the task of building up the size and efficiency of the Reserve, which depended largely on the flow from the active list for the maintenance of its strength and effectiveness. The virtual cessation of this flow resulted in a progressive deterioration of the Reserve and new methods of building up its strength had to be devised and put into operation. Consequently, plans were drawn up in 1936 for the creation of the Royal Air Force Volunteer Reserve which envisaged the immediate formation of a pilot reserve on a much larger scale than hitherto conceived, in addition to the ultimate formation of sections for the training of aircraft crews and of a reserve of officers trained in equipment, medical, engineering, signals and other specialist duties. Reserve strength was further increased later by the formation of the Civil Air Guard, the Civilian Wireless Reserve and the Royal Air Force Ex-officers Emergency Reserve.

Much was accomplished during the first four years of expansion but at the time of the Munich crisis much still remained to be done before the Royal Air Force could be regarded as ready for war. Large numbers of recruits had been entered but many of these were still untrained or were only partially trained. The flow of recruits was satisfactory and the key to the problem of manning the Royal Air Force at this time lay in the provision of more training schools, training aircraft and instructors for both the regular Air Force and the Reserve, and none of these could be provided overnight. The Air Member for Supply and Organisation said in March 1938 that a considerable expansion of ground training facilities, which had increased very little since pre-expansion days, was vital and that even with such an expansion it would be several years before deficiencies in certain trades could be made good. This training difficulty was a legacy of pre-expansion economy and was to become even more acute in the period of accelerated expansion which followed the Munich crisis. Thus, it was not the provision of untrained manpower which was primarily responsible for slow expansion.

CHAPTER 3

THE MUNICH CRISIS AND THE LAST YEAR OF OF PRE-WAR EXPANSION

The Munich crisis of September 1938 provided the final impetus to pre-war air expansion. In addition to revealing many grave deficiencies, the crisis instilled in the public a new keenness to join the Armed Forces which was reflected immediately in the recruiting figures for the Royal Air Force. In order to deal with this heightened flow of volunteers, the Treasury authorised the formation of an additional Technical Training School and a Depot for 3,000 men. Even though a hold up in the flow of recruits from Depots to training establishments was inevitable, the Air Council agreed that the fullest advantage should be taken of the favourable recruiting atmosphere by entering the maximum number of suitable recruits even if it should prove difficult to find employment for all of them.(1)

The original mobilisation procedure of the Royal Air Force had provided for officers of the R.A.F. Reserve to be called up by the Air Ministry as required in either a general or a partial mobilisation. It was for the Director of Personnel, who was responsible for filling vacancies in unit establishments, to decide, on mobilisation being ordered, the extent to which it was necessary to call up reserve officers, airman pilots and observers in order to make good deficiencies. The Officer-in-charge Records was responsible for the mobilisation of airmen reservists who were called up under automatic arrangements in a general mobilisation and individually, as they were required, in a partial mobilisation or a mobilisation for apprehended attack. This procedure had been modified in November 1937 when an Air Ministry Conference had decided that the Superintendent of Reserves should be responsible for the mobilisation of Reserve and R.A.F.V.R. officers and R.A.F.V.R. airmen. Mobilisation requirements were to be decentralised to town centres on the lines adopted for the A.A.F. under which each unit was responsible for maintaining in peace time calling-up documents prepared for each individual, and for issuing them when mobilisation was ordered. The Officer-in-charge Records remained the mobilising authority Classes 'E' and 'F' airmen, and the Air Ministry continued to be that for retired officers.

This decision was not implemented in so far as it related to the Superintendent of Reserves (A.O.C. No. 26 Group) when the Munich crisis occurred and it was then decided that the Air Ministry should continue to be responsible for the mobilisation of officers of the Reserve, but that the A.O.C. No. 26 Group should take over the responsibility for R.A.F.V.R. officers as soon as possible. These arrangements worked well during the crisis and it was clear that the posting and mobilising authorities should work in close proximity. It was for consideration, therefore, whether these arrangements should continue for officers and whether, in view of the impending formation of Reserve Command, the responsibility for mobilising all classes of airmen should not be transferred to the Officer-in-charge Records. Discussions followed and it was decided that the Air Ministry should be responsible for mobilising officers and the Officer-in-charge Records for mobilising

(1) E.P.M. 139.

airmen. On being called out, officers were to report where required, ex-regular airmen reservists at mobilisation pools and R.A.F.V.R. airmen at Town Centres.(1)

Apart from the shortages of personnel due to the incompleteness of the expansion programme, serious defects in the reserve system became apparent in September 1938. The Air Force relied on the mobilisation of its reserve personnel to bring existing squadrons up to war strength and to provide experienced men for the manning of new units, depots, etc. A large number of R.A.F. reservists were employed, however, in the aircraft industry and kindred trades of national importance, and the Air Ministry estimated that 35 per cent of Air Force reservists were, in fact, in occupations from which it would not be in the national interest to withdraw them for full-time service. Furthermore, a large number of civilian employees of the Royal Air Force were reservists of the Army or Navy, and their withdrawal would inevitably cause considerable dislocation, involving the loss to the Air Force of many men in key positions.(2)

During the crisis, some 20 per cent of the members of the Officers Emergency Reserve withdrew from their undertaking to serve after they had been earmarked for war appointments. A further difficulty in connection with this Reserve was that there was no alternative but to judge solely on their paper qualifications the capacity of members willing to serve, and it was on that basis that their appointments had been tentatively fixed. These were serious drawbacks and it was agreed that a legal hold on these officers was essential and that their capacity to carry out their war duties efficiently must be tested in peace time. It was felt that the position could only be adjusted satisfactorily by setting up an appropriate section of the R.A.F.V.R. for these officers. It was, however, finally decided that the Ex-Officers Emergency Reserve should continue to function side by side with the new Administrative and Special Duties section of the R.A.F.V.R. as it would form a valuable pool of potential officers who, while anxious to serve in an emergency, were unwilling to accept peace time reserve obligations.

Although the A.A.F. squadrons were called out on 26 September and the formation of Mobilisation Pools was ordered on 27 September 1938, no general mobilisation was ordered during the crisis, with the result that Home Defence units were working almost at war pressure with no more than their peace establishments. The Mobilisation Pools were ordered to close on 3 October, and the services of the A.A.F. personnel were dispensed with a week later.(3) Experience during the crisis made it clear that there should be some means, independent of Section 5 of the Air Force and Air Force Reserve Act, 1925, and of general mobilisation by which first line units could be brought up to war strength in an emergency and that the Secretary of State for Air should be empowered, in an emergency, to call up the reservists required to put the Home Defence units on a full operational footing.(4)

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(1) A.M. File S.38184.
(2) E.P.M. 155(38).
(3) D.D.W.O. Diary - Munich Crisis.
(4) E.P.M. 155(38).

Final Preparations for War

Prewar Policy for the Entry and Promotion of Personnel in War

The policy which the Air Ministry adopted on the outbreak of war for the entry and promotion of personnel stemmed largely from the recommendations contained in a memorandum on the war personnel problem, which was issued in October 1937.(1) The chief recommendations were that all wartime entrants should be enlisted in the R.A.F.V.R. under the same conditions as the peace time R.A.F.V.R. entrants and that all promotions should be temporary. This memorandum received the general approval of the Air Council in the persons of the Chief of the Air Staff, the Secretary and the Secretary of State.

This plan to recruit wartime entrants into the R.A.F.V.R. was followed by a decision that all engagements during the war should be for the duration of the emergency, as the size of the post-war Air Force could only be conjectured and it would be impossible to assess the entries required on a 'non-duration' engagement.(2) Moreover, there would be disadvantages in operating a dual system of entry. It was contemplated that the entry of apprentices should continue in war but that the entry of boy-entrants should be suspended. The decision to enlist all men on a 'duration' engagement was revised, however, when it became clear in September 1938 that both the Army and the Navy intended to continue enlistments for regular service during a war, as well as enlistments for the duration of the emergency, in order that at the end of the emergency an adequate number of personnel would continue their service. The Air Ministry then decided that, although administrative difficulties would prevent them running a dual system of entry during the period of voluntary recruitment which would follow mobilisation, they would resume regular recruiting if and when recruiting was transferred to a Ministry of National Service on the introduction of National Service. As it was felt that the post-war R.A.F. was unlikely to be smaller than that planned under Expansion Scheme 'M', it was decided in May 1939 to accept for regular service, during a war, an annual entry of 75 per cent of the normal entries under Scheme 'M' for trades other than apprentices. The abatement of the full entries under Scheme 'M' would allow for possible retrenchment or transfer of 'duration' personnel to long term engagements.(3) It was estimated late in August 1939 that recruitment on normal engagements would be resumed in the R.A.F. two months after mobilisation, by which time the conscription organisation would be ready.(4)

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(1) A.M. File S.41477.
(2) It was not until June 1939, however, that Parliamentary Counsel agreed that it would be legally possible to make 'duration of emergency' enlistments into the R.A.F.V.R. after it had been completely mobilised or called out for service. In fact, wartime enlistments overseas were made into the R.A.F. as legal difficulties in some countries prevented enlistment into the R.A.F.V.R. All direct entry officers, both at home and overseas, were commissioned in the R.A.F.V.R.
(3) A.M. File S.46661.
(4) A.M. File S.56113.

In fact, regular recruitment ceased on 24 August 1939 and was not resumed until the summer of 1944.

From the decision to enlist all wartime entrants into the R.A.F.V.R. under the same conditions as peacetime R.A.F.V.R. entrants, it followed that specialists entering the R.A.F.V.R. in wartime would be eligible for commissioning on entry but that entrants for pilot duties would not be commissioned until they had completed their flying training and had had squadron service. Pilots would pass out of training as sergeants and their subsequent promotion to commissioned rank would be made by an Air Ministry selection board in the light of a man's actual squadron service. It was considered essential to efficiency and good feeling that advancement to commissioned rank should depend upon the test of war and should not be solely in respect of performance during training. It was felt that any other system would result in undesirable inequalities between the regular airman, the peacetime reservist and the wartime entrant. The plans for commissioning in time of war were modified, however, before September 1939. It was agreed that University entrants holding the proficiency certificate of a University Air Squadron should be commissioned immediately upon entry in time of war.(1) It was agreed in March 1939 that it would be impossible to adhere rigidly to the rule that all non-University entrants for pilot duties in wartime should pass out from training as sergeants. It had been learned that the War Office intended to offer commissions in wartime to a number of selected young men with O.T.C. and other qualifications, subject only to their passing satisfactorily through a period of training in the ranks of Officer Producing Units. It was felt, therefore, that if the Air Force offered no prospect of a commission until after operational experience, they would, in the early stages of a war, lose the cream of the field to the Army.(2) It was felt, moreover, that it would make for efficiency if those candidates who showed exceptional merit during their flying training could be recommended by the Officers Commanding, Flying Training Schools, for appointment to a commission directly on passing out. Recruits selected for a commission would be informed at the time and would be treated as cadets but would be enlisted and paid as airmen under the current arrangements. Cranwell cadets, while completing their training, were to be treated in the same way as recruits selected for officer pilot duties. The proportion of pilots who should be commissioned in wartime on the completion of training was discussed in the spring of 1939.(3) No definite

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(1) University Air Squadron members with a proficiency certificate enjoyed a similar privilege with regard to peacetime entry into the R.A.F.V.R.
(2) A.M. File S.81658.
(3) A.M. File S.41477.

conclusion was reached but it was agreed that the proportion to be so commissioned should be related to the peace, and war, establishments of officers and airman pilots.(1)

The policy for the promotion of officers and airmen, which was adopted on the outbreak of war also stemmed largely from the memorandum of October 1937 which recommended that all promotions made after mobilisation should be temporary in the sense that they would be subject to review when the war ended. Although this would not prevent, during the war, inequalities of opportunity of promotion as between different classes of personnel, it would enable the Air Ministry to mete out as equal justice as was possible to regular personnel when the war ended, in the light of the situation which then existed. Certain minor modifications were made in the scheme as a result of discussions with the War Office and the Treasury.(2) It was announced to the Service on 6 September 1939 that all promotions during the war would be temporary except that in so far as vacancies occurred within the limits of the peace establishments existing at the outbreak of war, officers holding permanent commissions would continue to be eligible for substantive promotion to those ranks for which promotion was by selection in peace time.(3)

Changed Conditions of Service for Non-Pilot Aircrews

The method of recruitment and terms of service for non-pilot aircrews were changed in October 1938 in an attempt to improve their quality and speed up recruiting. It had been felt for some time that the existing system of providing observers, wireless operators and air gunners could not be relied upon to produce efficient crews, fully competent to meet any emergency. Experience had shown that the effective employment of observers and air gunners in their basic trade in addition to their crew duties was impracticable even in peace; moreover, it had always been accepted that wartime crew employment would be full time and it was, therefore, basically unsound to maintain in peace a policy which would add unnecessarily to the inevitable dislocations that would arise on mobilisation. The provision of observers from the highly skilled apprentice trades was clearly uneconomical as it involved their withdrawal from their trade before an adequate return for their expensive training had been secured, and inevitably meant that they lost a large degree of their trade skill during their long period of aircrew employment.

It was decided, therefore, in October 1938 that all wireless operators (air gunner) and air gunners should be drawn from the boy entrant wireless operator and that they should be

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(1) The gross strength of trained pilots in the R.A.F. on the outbreak of war was:-

	Officers (Flt.Lt. & below)	Airmen	Total
Regular	3,561	1,450	5,011
Reserve	886	816	1,702
	4,447	2,266	6,713

(A.M. File S.80787)
(2) A.M. File A.49034/40.
(3) A.M.O.s A.353/39 and A.354/39.

employed continuously on aircrew duties after completing their crew training. After about three years as aircrew, some twenty-five per cent of them would be selected for training as observers and would spend the remainder of their Service career as such. The remaining seventy-five per cent would complete their initial engagement of nine years as wireless operators (aircrew). As a temporary measure, observers were also to be obtained by the direct entry of well educated young men, but it was intended that all observers would eventually be drawn from wireless operators.(1)

It was regarded as essential for the success of the new scheme that the assumption that observers could be of a lower standard than pilots should be finally abandoned and that they should be placed on an equal footing with airman pilots as regards pay and status. It was proposed, therefore, to award a number of permanent commissions annually to N.C.O. observers in the same way as to N.C.O. pilots,(2) but this proposal was not implemented until after the outbreak of war owing to the difficulty of agreeing on the conditions of service of commissioned observers.

The Schedule of Reserved Occupations

The Munich crisis had revealed serious shortages in all branches of the Services and their Reserves, and the Cabinet, which still opposed conscription in peace time, decided to launch a large scale campaign for volunteers for every form of national service. A government handbook, 'National Service', was accordingly issued by post in January 1939, to every household in the country, approximately twenty million copies being delivered in all. The handbook referred briefly to every form of Service and civilian activity which required additional recruits, and even included application forms ready to be filled in and posted to the local office of the Ministry of Labour.

It was obvious that the indiscriminate volunteering of skilled technicians for service in an emergency, in response to the Government appeal, would be of less value to the nation than their retention in industry where they would form the nucleus for the inevitable expansion in war. The Government accordingly issued the first Schedule of Reserved Occupations in January 1939. The Lord Privy Seal explained that if the country had to mobilise for defence, persons above a certain age and employed in key occupations could best serve the nation by remaining at the work for which they had been trained, at any rate in the initial stages of a war. The Schedule was compiled on an occupational basis without regard to the industry in which the man was employed. Women were reserved under modified regulations, and special arrangements were made for professional men and for men with higher technical qualifications.

This peace time Schedule, which marked a revolution in peace time manpower planning, did not in any way prevent a man enlisting for regular service in the Armed Forces, but it did prevent volunteers from important civilian trades being accepted into the Auxiliary and Reserve Forces in greater numbers than industry could afford or in a capacity which would mean

(1) E.P.M. 140.
(2) E.P.M. 156(38).

employment outside their trade in time of war. In view of the fact that the paramount need in the early months of 1939 was to obtain additional recruits for the Reserves and Civil Defence Force, it was agreed on a Ministerial level that the Schedule should not be rigidly applied. Ex-airmen who volunteered for service in Class 'E' of the Air Force Reserve and aircrew candidates for the Auxiliary Air Force and the Royal Air Force Volunteer Reserve were exempted from the provision of the Schedule. All applicants for membership of the Civil Air Guard, however, had to obtain the permission of the Ministry of Labour, unless they had previously served as pilots in the R.A.F. or in one of its Reserves, or were in possession of an Air Ministry 'B' licence or an 'A' licence with a minimum of 50 hours solo flying experience.

Expansion Scheme 'M'

Meanwhile, Expansion Scheme 'M', which incorporated most of the still outstanding items of previous expansion schemes, had been drawn up in October 1938, under the compelling influence of the Munich crisis, and had been approved by the Cabinet on 7 November 1938. It was due for completion by 31 March 1942. In order to develop the Air Force to Scheme 'M', some 26,600 officers and airmen would have to be entered for regular service during 1939, and Treasury authority for recruiting on that basis was obtained in advance of a Supplementary Estimate.

The Air Council decided in January 1939 that, with a view to stimulating applications for short service commissions in order to meet the very large requirement for 1939, the upper age limit for entry to a short service commission should be raised from 25 to 28 years. As a further inducement to come forward, candidates were, in future, to be given the option of an initial period of six years on the active list followed by four years in the Reserve or, alternatively, the existing terms of four years active list service followed by six years in the Reserve.(1)

Recruiting for the majority of trades proceeded satisfactorily early in 1939, but mere recruitment was no answer to the problem of the availability of trained personnel when related to the immediate time factor. This was particularly true with regard to the Group I tradesmen upon whom the Air Force depended for efficient aircraft maintenance.

Given adequate training accommodation, equipment and instructors, airmen recruited for Group II trades could be trained and made available to fill establishments in just under twelve months, on an average. The courses of instruction had, however, been reduced from the proper requirement to practically a war standard, with the result that the percentage of failures who required further instruction was unduly high, whilst those who passed out required the closest supervision during the early part of their service thus throwing a greater strain on the Group I personnel.

Group I tradesmen were practically unobtainable by recruitment from civil life, and were either the product of apprentice training or of conversion courses given to ex-apprentice and Group II tradesmen who had served sufficiently long to obtain the necessary experience to fit them for

(1) A.M. File 869944/39.

conversion and advancement. In general, therefore, Group I personnel could only start to be made available in three to six years, according to the particular trade, from the date of recruitment, and this in turn could not commence until after the requirement was made known and the establishment approved. There was, therefore, no hope whatever that the supply of additional Group I personnel could keep pace with the output of additional Group II personnel to meet an expansion programme of the nature and speed of that with which the Air Force was faced in 1939 and which the Air Staff had been endeavouring to carry out during the previous three years.

This shortage of the higher skilled tradesmen and of supervisory personnel had been constantly referred to by the Air Member for Personnel in consideration of the many expansion schemes and proposals. It was strongly emphasised by him later in 1937, and when Scheme 'L' came into being in April 1938, and the seriousness of the position in relation to the expansion then planned had been accepted by the Air Council with reluctance. Since then, however, the relative position had become even worse and serious alarm was caused in the summer of 1938 by the constant addition to the programme of items which, it was demanded, should be met as early as possible. This alarm was further accentuated after the crisis of September 1938 which resulted in constant demands to speed up a machine which was already running at its maximum capacity. As a result, the already serious deficiencies in the essential Group I trades were expected to be even more serious by 31 March 1940, for which date a deficiency of 8,496 was forecast.(1) The time factor alone precluded any improvement by March 1940, and all that could be done was to investigate means of lessening the length of time required to equate strengths and establishments. The Air Member for Personnel emphasised in February 1939, that the deficiencies in essential tradesmen during the coming year in particular were so serious that a breakdown in the whole of the organisation was threatening and would almost certainly occur unless further demands on skilled personnel were restricted to unavoidable essentials.(2)

The signals trades were causing particular anxiety at this time, and in February 1939 there was a deficiency of 1,100 wireless and electrical mechanics. The apprentice course for the trade was being maintained at capacity and, in order to supplement it, a course, with a capacity for 300 trainees, was established at Cranwell for the conversion of selected wireless operators to wireless and electrical mechanics.

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(1) Details of the establishment and strength forecast for 31 March 1940 were as follows:-

	Establishment	Strength	Deficiency
Fitters I	10,650	5,880	4,770 (44%)
Fitters II	7,570	5,850	1,720 (24%)
Fitters Armourer	1,290	831	459 (35%)
Instrument Makers	760	360	400 (54%)
W.E.Ms.	2,960	1,813	1,147 (39%)
	23,230	14,734	8,496

(E.P.M.20(39))
(2) E.P.M. 139.

The wireless operator position was quite as serious, as intending recruits frequently preferred to wait until they could be entered for training as fitters, being influenced partly by the prospects of obtaining civilian posts when their Service career ended. Requirements had greatly increased and the following special measures to secure a sufficient number of suitable trainees were introduced early in 1939:-

(a) Publicity was increased within the limits imposed by the Treasury. It was decided to issue display advertisements dealing with the trade, to issue an illustrated booklet and to exhibit 'trailer' films dealing with the duties, etc., of wireless operators.

(b) A number of candidates whose education was below the required standard were entered and then given special education at the depots to bring them up to standard.

(c) The Inspector of Recruiting was instructed to divert to wireless operator as many as possible of the applicants for flight mechanic and flight rigger who were educationally suitable, in view of the favourable recruiting position in the latter trades.

As a result of these measures, the flow of men for training as wireless operator greatly increased. The difficulty lay, as usual, in finding adequate accommodation for the trainees. There was accommodation for 700 boy entrant wireless operators at Cranwell, which was filled to capacity, and for 2,000 men entrants. Arrangements were in hand for increasing this latter figure by one thousand, and possibly by two thousand.(1)

The Air Estimates and Recruiting Programme for 1939/1940

When opening the House of Commons debate on the Air Estimates on 9 March 1939, Sir Kingsley Wood, the Secretary of State for Air, announced that over 31,600 pilots, observers, airmen and boys had entered the Air Force since June 1938. Of this total, over 1,400 were pilots. Recruitment during the preceding financial year had been the largest for any single year since 1918. He emphasised that the new, extended programme necessitated a continuing flow of recruits of high quality and that more air observers and wireless operators were particularly needed. Sir Kingsley Wood stated that, in all, 75,000 men would be required for the Royal Air Force and its reserves and auxiliaries during the coming year.

The recruiting programme for the regular Air Force for the financial year 1939/40 provided for the enlistment of 26,332 men of whom 25,123 were to be skilled men or men suitable for training in an Air Force trade. Only 1,209 aircrafthands were required. Although the programme was less, numerically, than that of the previous year, the following factors combined to make its fulfilment more difficult: an increased proportion of a better type of recruit was required; unemployment was decreasing; the Navy was enlisting a similar type of man for the Fleet Air Arm: and there were increasing opportunities for men to serve their country in one or another of the various auxiliary services. It would also probably be difficult to sustain public interest after the supreme efforts of 1938.(2)

(1) E.P.M.35(39).
(2) A.M. File 751780/38.

Nearly 13,000 flight mechanics and flight riggers had to be found as compared with an actual entry of fewer than 9,000 in 1938. If the necessary numbers were forthcoming for these trades, the existing training facilities would be quite inadequate, but it was agreed that, nevertheless, recruiting must be continued as rapidly as possible.(1)

The Military Training Act (M.T.A.)

The Military Training Bill which became law on 26 May 1939, marked another step in the direction of national manpower planning by imposing for the first time in the United Kingdom the obligation of compulsory military training in peace time. The Act, which was introduced primarily to meet the Army's need for a large trained reserve, imposed on all men reaching the age of twenty an obligation to undertake whole time service in the Royal Navy, the Army or the Royal Air Force and, thereafter, to serve a specified period in the appropriate reserve, which in the case of selected optants for the R.A.F. meant four and a half years in the Royal Air Force Volunteer Reserve.

Two months before the Military Training Bill had become law, the Air Member for Personnel had considered the desirability of compulsory service from the R.A.F. point of view. His conclusion was that so far as the requirements of the regular Service were concerned the adoption of conscription would not help to improve the situation as the R.A.F. was already able to meet its requirements fully in quantity but not altogether in quality. Young conscripts whose period of continuous service would be limited to six months would be of little use in making good the serious deficiency of highly skilled tradesmen. With regard to meeting reserve requirements, the Air Member for Personnel said that even if enough volunteers came forward, the lack of training facilities would bar the acceptance of many of them and this same trouble would arise with conscripts. He felt that it would probably be simpler and less expensive to improve the conditions of service of the R.A.F.V.R. than to adopt conscription.(2)

Nevertheless, and despite the fact that the Military Training Act came at a particularly awkward time for the Air Force, the Air Staff were compelled to take part for political reasons, and agreed to take 12,000 ground personnel and 1,200 aircrew candidates during the first twelve months. As had been anticipated, the number of R.A.F. preferences expressed on registration on 3 June greatly exceeded the 12,000 who could be accepted,(3) and considerable discrimination could be exercised in the final choice of applicants. All enlistments were as aircrafthands under training and the standard of acceptance for tradesmen was high. They were required to have served for at least two years in a specified trade(4) and even then they were

(1) E.P.M. 163.
(2) E.P.M. 56(39).
(3) Some 33,000 R.A.F. preferences, including 6,000 for aircrew training, were expressed on registration.
(4) Tradesmen stood no chance of acceptance unless they were skilled in one of the following trades: Fitter or allied mechanical trade; Rigger (aeroplane); Clerk; Mechanical transport driver; Photographer; Carpenter or Joiner; Gunsmith or Armourer; Fabric worker; Cook; Wireless and electrical trades including instrument maker.

given no guarantee that they would be employed in their basic trade. In fact, candidates were warned that they might have to be employed as aircrafthands for the whole of their six months continuous service.(1)

With the whole of the normal accommodation and training facilities of the R.A.F. already occupied with the training of regular airmen, the disposal of the 12,000 militiamen who were to be absorbed in batches of 2,000 every two months, beginning on 18 July 1939, presented a major problem. It was finally decided that each batch of 2,000 should be divided between twenty operational or training stations where accommodation, mostly in tents, had been contrived for a hundred men and where there was a possibility that they could receive disciplinary training and service training in their trade. Planning on this basis for as far ahead as the autumn of 1940, it was arranged that no station should be called upon to accept more than one batch of one hundred men. How this would have worked out is a matter for conjecture as war had broken out before the second batch of 2,000 was called up on 18 September, and the men were then posted, like any other recruits, to a Recruits Receiving Centre where they entered the normal training. War had broken out before even the first of the M.T.A. aircrew candidates could begin their training.

Owing to the outbreak of war in just over three months after the enactment of the Military Training Bill, and to the shortage of accommodation in the summer of 1939, the original purpose of the M.T.A. the building up of a trained reserve in the minimum of time, was not fulfilled. The experience gained in the registration and medical examination of the conscripts proved invaluable, however, in the administration of the wartime National Service Acts. The Act also provided a good opportunity for scientific manpower planning in the allotment of intakes and brought to light many problems in that connection. So far as the actual conscripts were concerned, the only real value of the Military Training Act to the Air Force was that it afforded an opportunity to record details of the men accepted, their place of residence and the trade or employment in which they could most appropriately be placed.

The Re-Organisation of Specialist Officers

There was a growing feeling during the 1930's that the system of entrusting technical duties to general list officers did not adequately meet the needs of the modern Air Force with its increasingly complicated aircraft and equipment. The new conditions demanded a technician of a much higher standard who could concentrate on technical matters and make his career in a technical branch. Operationally, the existing policy involved the withdrawal of pilots from flying employment at the stage when they were of the most use in squadrons, and the fact that, throughout their career, they alternated between operational and specialist employment had an adverse effect on both their operational and their specialist efficiency. The expectation that university entrants with an honours degree in engineering would come forward in sufficient numbers to meet requirements of starred specialists had not been realised and it was evident by 1939 that other arrangements would have to be made to provide the higher grades of specialists required for research and development work.

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(1) A.M. Files A.839108/45 and S.53623.

As a result of this growing disquiet, the Air Council reviewed the whole situation early in 1939(1) and decided in July to adopt a new policy for the provision of engineer, armament and signals experts for whom a separate Technical Branch was to be set up.(2) It was intended that the majority of junior posts would be filled, as under the existing policy, by commissioned warrant officers, but a number of posts would be reserved for a new type of direct entrant higher grade specialist, in order to provide a flow to the senior posts, all of which would ultimately be filled by these direct entrants. The principal value in setting up the Technical Branch lay in entering officers as technicians and not for general duties.

These higher grade specialists would be drawn mainly from university graduates in engineering; from public school or technical college candidates who had had at least three years good practical engineering experience and had continued their technical education up to the standard of a Class II honours degree; and from candidates who had theoretical knowledge up to degree standard and had had good practical engineering experience. A considerable length of time would be needed to build up the required strength of higher grade specialists and in the meantime G.D. officers would continue to be employed in technical posts.

Before details of the proposed re-organisation of specialists could be settled with the Treasury, however, war had broken out, and it was not until April 1940 that the proposals could be implemented and a Technical Branch be set up.

Expansion Scheme 'M', Revised

The requirements of Scheme 'M' as estimated late in 1938 had necessitated the entry into the R.A.F. of some 26,000 men during 1939, and authority was obtained from the Treasury for recruiting on that basis in advance of a Supplementary Estimate. The programme was increased by 3,500 in the summer of 1939 in order to provide the additional regular personnel for the London and provincial balloon barrages consequent on the decision to maintain a proportion of these on a ready for war basis.

The Director of Organisation furnished in July 1939 a revised estimate of the requirements of Scheme 'M' as at 1 April 1941(3) which, including the personnel for the balloon barrages, showed an increase of 985 G.D. officers and airmen pilots, and 18,539 airmen over the forecast of the previous December.(4) To meet these increases necessitated increasing to over 45,000 the recruiting programme for airmen for 1939. No

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(1) E.P.M. 108(39).
(2) E.P.M. 174.
(3) E.P.M. 114(39).
(4) The principal increases in airmen requirements were as follows:-

Fitter Group	3,910	(including 2,669 Group I)
Wireless& Elect. Group	2,834	(including 43 Group I)
W.O. Crews	1,640	
Armament Group	771	(including 321 Group I)
Instrument Group	727	(including 492 Group I)
Balloon Operators	3,438	
Cooks & Butchers	605	
Clerks	889	
Teleprinter Operators	509	
Drivers Petrol	791	
Equipment Assistants	301	
Other trades	2,124	(including 32 Group I)
	18,539	(including 3,557 Group I)

increase in the entry of pilots during 1939 was possible because the available training facilities were all more than fully employed already.

The broad effect of these increases was that, so far as pilots and aircrews were concerned, there would be a deficiency of about 2,000 pilots on 1 April 1941, which, even with the additional training facilities that were contemplated, would not be made good until after 1 April 1942. Observer requirements were not materially changed but the additional 1,640 wireless operators (crews) necessitated a corresponding increase in the wireless operator entry.

It was hoped to enter the additional airmen during the current year and, with the facilities then contemplated, to train them all, except the Group I tradesmen, by 1 April 1941, or shortly after. Men of the allied Group II trades would have to be borne against the increased Group I requirements, thus materially increasing the already high rate of dilution.(1) The peak populations of the training units would have to be maintained for longer periods than had been contemplated, which might lead to some delay in converting Group II tradesmen to Group I unless further facilities could be provided. In order to stimulate recruiting, the Grade I medical standard was waived, arrangements were made to accept married airmen down to the age of 20 and a new publicity campaign was opened.(2)

In view of the serious deficiencies in certain trades and the increasing requirements for airmen, both at home and overseas, the Officer i/c Records undertook in June 1939 an examination of the trade position in home commands. He emphasised that there was a current deficiency of 11,000 men, including 2,000 fitters I and II and equally serious deficiencies in a number of other trades. He proposed that a number of remedial measures should be introduced forthwith and this was agreed by the Air Council. It had already been agreed that in war all courses would be cut by 25 per cent and it was decided in July 1939 to introduce such a cut immediately, thus yielding approximately 4,000 airmen of all trades. Restrictions were to be removed on the number of civilians who could be employed in lieu of airmen, thus permitting the employment of the balance of civilians required to complete the airmen establishments. As Overseas Commands were having to bear a much smaller proportion of deficiencies than the Home Commands, it was decided to delay overseas drafting until a later part of the trooping season by which time more trained airmen should be available.(3)

Formation of the Director of Manning

The Deputy Directorate of Manning had been abolished at the instance of the A.M.P. in July 1935, and the responsibility for the formulation of the policy for the manning of the Royal Air Force had then been transferred to the Head of one of the Secretarial Divisions attached to the A.M.P.'s Department and to the Principal Assistant Secretary (Personnel). Under this organisation, the officers responsible for personnel planning, not being officers of the Royal Air Force, were without first-hand knowledge of the Service, its requirements and its probable developments.

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(1) E.P.M. 114(39).
(2) E.P.M. 175.
(3) A.M. File S.54858.

In view of the complexity of the personnel problems which were arising in connection with the expansion of the R.A.F., it had become necessary by early 1939 to strengthen the staff responsible for the formulation of the policy for manning the Air Force. Experience gained during the preceding years had proved that it was essential that the responsibility for planning the provision of the manpower should be divorced from the responsibility for the day-to-day administration of personnel problems and that the work of planning required the whole time attention of a Royal Air Force Director. The Air Council therefore proposed in April 1939, to appoint a Director of Manning for this purpose.

The proposal was put before the Treasury and was sanctioned by them on 24 June 1939. The new Director, whose post was established in the rank of Air Commodore, took up his duties on 17 July 1939. He assumed responsibility for estimates, forecasts and statistics of personnel requirements; overhead and bulk establishments; programmes of instructional courses; training and promotion requirements. He also relieved D.P.S. of executive control of recruitment for the R.A.F. and for the Volunteer and Regular Reserves, and of all questions of policy in relation to the Inspector of Recruiting, the Reserve Command and the Record Office.(1)

Development of the Reserve and Auxiliary Forces during the Last Year of Peace

The Secretary of State for Air warned in October 1938 that the limiting factor in the United Kingdom war strength by the end of 1939 would no longer be the supply of aircraft but that of crews to man them, particularly in the Reserve.(2) The problem of personnel would thus become increasingly important as the aircraft situation improved. So far as the R.A.F.V.R. was concerned, he felt that the numbers required, which were of the order of 25,000, including pilots, must be well within the resources of the country to provide. The training of R.A.F.V.R. crews was, however, a much more difficult problem and, although trained crews were expected to become available in considerable numbers in the summer of 1940, exceptional measures were required to accelerate this programme. Keen as the Volunteer Reservists were, it was estimated that under the R.A.F.V.R. system the training took, on an optimistic estimate, a period from three to four times as long as that required for the continuous training which was a feature of those conscript forces against which the forces of the United Kingdom might have to be matched.

The Secretary of State then announced that a new type of reserve enlistment was being prepared whereby the reservist would join initially for a six months period of continuous service on full pay for training, the inducement being a bonus at the end of the period and a substantial retaining fee during his period of reserve service. The response to this plan was good and the first R.A.F.V.R. pilots began their continuous training early in 1939. By July 1939, about 180 were undergoing training and all vacancies were filled. Meanwhile, it had been decided in March 1939 to launch a similar scheme for R.A.F.V.R. observers and air

(1) A.M. File S.51698.
(2) C.P.218(38).

gunners but not to launch it until it could be seen whether the introduction of compulsory military training, which was then being discussed, would meet requirements.

Estimates which were made in the autumn of 1938 showed that a Reserve of between 70,000 and 80,000 personnel was required, and that more than half of these men would have to be provided by the R.A.F.V.R. organisation. This would have involved too much additional work for No. 26 Group which controlled the Elementary and Reserve flying training units. The staff were already overworked and could assume no further responsibilities, and it was decided, therefore, to form a new Group (No. 27) immediately to assume control of a number of schools and centres, and ultimately to form two more new Groups. Training Command was already the largest Command, however, and could not efficiently expand further. The Air Council therefore authorised, in November 1938, the formation of Reserve Command as from the following February, under an Air Officer Commanding, Reserves.(1) Reserve Command consisted of four Groups which were responsible for the Elementary and Reserve Flying Training Schools and for ground training organised on a geographical basis.

It was estimated in November 1938, that re-inforcements from the United Kingdom would be unable to reach theatres of war in Egypt and Singapore within three months and that some 700 pilots and 750 aircrews would be required to bridge the gap, in the possible theatres of war, between the outbreak of hostilities and the arrival of replacements from the United Kingdom. The only effective method of producing these pilots and aircrews was to recruit and train them in parts of the Empire within easy reach of overseas units which were likely to need reinforcements. For this purpose, it was proposed that local Volunteer Reserve Centres should be set up under the A.O.C.s concerned. The advantages of the proposal were:-

(a) It would fulfil the operational requirements of Overseas Commands by providing reserves of flying personnel which would be available for service at short notice.

(b) It would help to relieve the congestion of training centres in the United Kingdom.

(c) It would provide training facilities abroad which would be capable of immediate expansion in war.

(d) It would give considerable satisfaction to those Colonies which had been pressing for the development of military aviation in their territories.

(e) It would draw upon a reserve of promising personnel which would not otherwise be available.

Preliminary investigations showed that such a scheme was practicable and that a sufficient number of applicants for entry into the Volunteer Reserve could be anticipated.(2) Unfortunately, the completion of arrangements took an extremely long time and war had broken out before the plan could be put into operation.

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(1) A.M. File S.47389.
(2) E.P.M. 167 (38).

It was decided in December 1938 to put into operation immediately the scheme for the recruitment of tradesmen into the Royal Air Force Volunteer Reserve so that the actual recruiting could begin in January 1939 in response to the appeal in the Government handbook 'National Service'. The immediate plan was for the enlistment of 6,600 semi-skilled tradesmen and aircraft-hands as quickly as possible. Several months later, recruiting was opened for skilled tradesmen. The response was good and it was only with difficulty that the provision of training facilities could be made to keep pace with recruiting. Training for the semi-skilled tradesmen was based on regular units affiliated to R.A.F.V.R. Centres, while training facilities for the skilled tradesmen were provided, in the main, by Local Education Authorities throughout the country.

It had always been intended that every member of the Civil Air Guard who held an 'A' Licence should be earmarked for his or her wartime or emergency role. The Munich crisis made this an urgent consideration, and the Air Ministry published details of their plans in January 1939. All 'A' licence holders were to be placed in one or another of the following classes in a provisional register:-

Class 'A'

(a) Men aged between 18 and 30 years who might be employed as Service pilots in the event of war.

(b) Men over the age of 30 who had instructional qualifications or who had considerable flying experience and might be suitable either as Service pilots or as instructors in the event of war.

Class 'B'

Men up to 40 years of age who, for one reason or another, were not eligible for Class 'A', but who might be able to undertake other Service flying duties.

Class 'C'

Men who were in neither Class 'A' nor Class 'B', and all women, who might be suitable, according to their experience, for employment as ferry pilots, ambulance pilots or for general communication duties.

Air Guard members who were unlikely to qualify for any of these classes were to be encouraged to take part in some other form of national service.(1)

The conditions of service for the Auxiliary Air Force were changed in April 1939. Airmen who had joined the Auxiliary Air Force before that date were, under the terms of their engagement, liable for neither overseas service nor for transfer, posting or attachment to a unit other than their own parent unit except with their consent.(2) A King's Order published on 26 April 1939, however, altered the terms of service of men joining the Auxiliary Air Force after that date by providing that an auxiliary airman, when embodied, might be attached, but not transferred or posted, to another unit without his consent. Airmen who had

(1) A.M. File S.49170.
(2) A.M. File A.27250/39.

joined before 26 April 1939 were not affected. No legal limitation existed in connection with the posting of A.A.F. officers,(1) who could be posted either to another A.A.F. unit or to a R.A.F. unit.

One of the many difficult problems which had confronted the Air Council after the Munich crisis had been the availability of Air Force reservists in the event of another emergency. It was estimated in October 1938 that as many as 35 per cent of Air Force reservists were in occupations from which it would not be in the national interest to withdraw them for R.A.F. service.(2) The whole question of the position of these reservists in the event of mobilisation was examined in the spring of 1939, and in May the Air Council decided that on mobilisation:-

(a) All members of the A.A.F., and those members of the R.A.F.V.R. who had definite war posts in the Home Defence organisation of the R.A.F., should be released immediately from the factories.

(b) Regular reservists and those R.A.F.V.R. personnel not included in (a) above should remain at their posts in the factories.

The Air Council agreed that a travelling commission should be formed to visit the factories and examine each individual case with a view to releasing from industry those men under (b) above who were not considered indispensable and to claiming exemption from call-up for men under (a) above who were considered indispensable.(3)

The Military Training Act of May 1939 affected the terms of service of members of the Auxiliary Air Force, the Royal Air Force Volunteer Reserve and other non-regular reservists to the extent that all who had enlisted in such a reserve on or after 27 April 1939 and had not attained the age of 21 years on 3 June 1939, were required to accept a liability to attend for six months continuous training when called upon.(4) It also meant that members of the University Air Squadrons had also to become members of the R.A.F.V.R. The Civil Air Guard could no longer enrol men aged under 21 years; probationary members of the C.A.G. under age 21 had to be discharged, but enrolled members under age 21 were allowed to continue their training until they were called up for military training. Men who had completed their six months continuous training would not be allowed to join the C.A.G. until their four years liability for reserve service had expired.(5)

Treasury approval was given in July 1939, to the Air Ministry's proposal to transfer the Civilian Wireless Reserve to the R.A.F.V.R. Recruiting for the Civilian Wireless Reserve ceased on 13 July, and members were invited to transfer to the R.A.F.V.R. Those who lived or worked within reasonable travelling distance of an R.A.F. station were to receive regular training at that station. Other members, who lived too far from

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(1) A.P. 968 para.4 (iii).
(2) E.P.M. 155(38).
(3) E.P.M. 71(39).
(4) A.M. File S.53623.
(5) A.M. File 897779/39.

an Air Force station, were to receive training at special schools on similar lines to the scheme for training other R.A.F.V.R. skilled tradesmen.(1) When recruiting ceased, the Civilian Wireless Reserve had over 1,200 members whose combined skill and enthusiasm proved a very valuable addition to the R.A.F.'s slender reserves.

Mobilisation for War

The darkening international situation in the late summer of 1939 resulted in the general mobilisation of the Royal Air Force being ordered on 24 August. From that date the only recruits who were accepted for the regular Air Force were those who had already been warned for draft. Recruitment was henceforth on a 'duration of emergency' basis except for apprentices,(2) and all enlistments at home were into the Royal Air Force Volunteer Reserve.

It had already been decided that in the event of mobilisation being ordered, recruiting should continue on a voluntary basis, subject to certain restrictions in regard to age and occupation which might be imposed by the Government of the day.(3) The period of voluntary recruitment was, as had been agreed, divided into two. Stage I was a short period ending on 1 September during which recruiting should have continued at existing R.A.F. Recruiting Depots, but during which no recruits were, in fact, accepted owing to the lack of the necessary forms, etc. Stage II began on 2 September and all recruiting Depots, Branch Depots and Sub-depots then closed down and recruiting for the three Services opened at Combined Recruiting Centres.

On 1 September 1939, the R.A.F. Reserve (including the R.A.F.V.R.) was called out for permanent service, and the Auxiliary Air Force was embodied. On the same day, the terms of service of the A.A.F. were altered by an enactment to the effect that any officer or man belonging to an embodied part of the A.A.F. would, during the existing period of embodiment, be liable to be ordered to go out of, or be carried out of, the United Kingdom.(4) The effect of the Act was that A.A.F. squadrons or units could be moved anywhere and that airmen who had joined the A.A.F. after 26 April 1939, could be attached to units other than their own wherever serving. Those who had joined before that date could still not be moved against their will except as a unit, a restriction which was to cause considerable inconvenience and waste of manpower during the following years until a solution to the problem was eventually found and put into effect in the spring of 1943.(5)

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(1) E.P.M. 109 (39).
(2) A.M. Files S.46661 and S.56113.
(3) A.M. File S.36534.
(4) A.M. File S.41477.
(5) The problem of the restrictions on the mobility of A.A.F. airmen was solved in April 1943, by which time all A.A.F. airmen who had joined before 26 April 1939, and were therefore unattachable unless they voluntarily signed an undertaking for general service, had completed their four years A.A.F. engagement. It was then decided that those of military age who did not volunteer for general service should be discharged and enlisted in the R.A.F.V.R. under the National Service Acts on the following day. Those who were not liable for call-up were retained in their existing employment for as long as possible, if they were efficient. Otherwise, they were discharged. (A.M. File A.27250/39).

When he announced to the House of Commons on 1 September that the complete mobilisation of all three Services had been ordered, the Prime Minister stated that the Royal Air Force was in the fortunate position of having almost as many men as it could handle for the time being. A broadcast on the same evening stated that the R.A.F. was in an extremely strong position as regards personnel and that it had never, since the end of the 1914-1918 war, been in a better position as regards both quantity and quality. Fitters and wireless tradesmen were called for, and volunteers for flying duties were asked to enter their names at the nearest recruiting office.

The general tenor of these announcements was reassuring to the public at large and they were made with the deliberate intention of discouraging any repetition of the industrial dislocation which had occurred in 1914 when 1,250,000 volunteers had joined the Army within the first four months of war. The actual manning position of the R.A.F. was, however, far less satisfactory than these reassuring statements must have led the public to believe. The reason was partly, though by no means wholly, that the Air Ministry were working to a target date of 1 April 1941,(1) so that once again the process of expansion had been overtaken by events. Although it was strictly true to say that the R.A.F. had almost as many men as it could deal with for the time being, the reason was not that all establishments could be filled but that the totally inadequate training facilities could not be expanded further, so that a bottleneck would result, as it did, if there were a sudden rush of recruits.

Earlier decisions as to the position of Air Force reservists in the event of mobilisation were not fully implemented in September 1939, when a number of A.A.F. personnel, as well as Volunteer and Class 'E' reservists, were retained in the aircraft industry. At an Air Council meeting on 26 September, it was decided that A.A.F., R.A.F.V.R. and Class 'E' reservists already retained by the aircraft industry should remain at the factories until 1 March 1940, when they were all to be made available to the Air Force. Regular reservists employed in industry other than the aircraft industry, and those employed by Public Utility undertakings and by other Government departments, were to be treated in the way that the Cabinet had recently approved for regular Army reservists, namely, their maximum period of exemption should be three months, but their employers would have the right to appeal in certain cases. A similar period of exemption from call-up was to be granted to 'screened' A.A.F. and R.A.F.V.R. personnel unless they were relegated to the Reserve under any comb-out procedure which the Air Ministry might adopt.

The mobilisation arrangements, which had been most carefully prepared beforehand, worked admirably and efficiently during the days immediately before the outbreak of war. It was not the physical process of mobilisation which caused serious difficulty, but the disposal of the men who were already called up, to over-populated training establishments.

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(1) A meeting in the office of the Air Member for Development and Production on 10 February 1939 had decided that the co-ordination of the preparations in connection with the force as then planned should be based on calculations related to 1 April 1941. (A.M. File S.50352).

Parliament passed three important Acts on the first day of war. These were the National Service (Armed Forces) Act, which was to be the chief instrument for supplying men to the Forces during the war; the Military and Air Forces (Prolongation of Service) Act, which authorised the retention for the duration of the emergency of men who had enlisted before the war, whatever their terms of engagement; and the Armed Forces (Conditions of Service) Act, which permitted Service enlistments for an indefinite term.

The Position on the Outbreak of War

Although vigorous steps had been taken in the years preceding the war to improve the manning position of the Royal Air Force, many of these steps had been taken too late for their benefit to be felt before the outbreak of war in September 1939. A number of short term training measures had had to be introduced and, although such measures as the shortening of courses and the withdrawal of skilled men from units to act as instructors had had the desired result of increasing the output of trained men, they had also resulted in a general lowering of the standard of the men passing out from training and, therefore, of the general efficiency of units.

The training and efficiency of the reserve and auxiliary personnel on the outbreak of war had not reached the high standard required. A number of factors accounted for this, among them being a tardiness to recognise the need for well trained personnel reserves in adequate numbers, and the ruthless financial stringency which had been applied to the Reserve forces throughout most of the preceding twenty years. Lack of funds had prevented adequate training being given to the regular reservists whose strength had been kept below safety level for a number of years in the interests of an economy which later proved to be false. After financial obstruction had largely been overcome and the Air Council had recognised the need for a large, well trained reserve, the build up of the reserve forces had been much slower than desired on account of the unwillingness or inability of men to undertake reserve service which entailed long periods of continuous training. This longer training was something new in relation to the reserves and auxiliaries, and the country was not accustomed to it. Many regular reservists, whose training had been neglected while they were in the reserve, were found to have lost their former skill and to be out of touch with recent technical developments within the Air Force. A number of reservists belonged to obsolescent trades abd were too old to be trained in another Air Force trade.(1)

The strength of the Auxiliary Air Force was seriously below establishment on the outbreak of war, a regrettable fact as the squadrons contained some excellent material, and morale and esprit de corps were exceptionally high. Unfortunately, the squadrons had to depend increasingly upon non-A.A.F. personnel

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(1) The Post War Manning Committee reported in August 1943 that 'experience in this war has shown the necessity of having a trained reserve of personnel in all categories from active pilots down to ground personnel. It is important to bear in mind the necessity for raising the post-war reserve to a higher standard than formerly, so that all officers are qualified for specific duties in wartime.'

(seldom less than one flight) during the war as no A.A.F. personnel were recruited to make good wastage. The regular personnel, because of their indispensability in the A.A.F. squadrons, were screened from general posting, thus creating another pocket of immobile airmen. The mixing of regular and A.A.F. personnel in squadrons caused difficulty and some discontent when the regulars had to be withdrawn for other duties as they felt that an invidious distinction was being drawn between themselves and the relatively non-postable A.A.F. personnel.

In short, on the outbreak of war, the Reserve was totally inadequate in numbers, likewise in skill and up-to-date training, apart from the long-service regulars in Class 'E' and aircrews in civil aviation.

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The crisis of September 1938 ushered in a period of intensified expansion for both the regular and non-regular Air Force. Expansion merely by the recruitment of large numbers of untrained men was, however, no answer to the problem of manning effectively an increasing number of units and, when war came a year later, there were still large deficiencies of trained aircrews and ground staff. The recruitment of enough trainees of the right quality presented no real difficulty in the majority of trades, but the training of the recruits presented an almost insuperable problem. Consequently, new means of speeding up and enlarging the training machine had to be investigated. A suggestion was made that 'shadow' training schools on the lines of 'shadow' factories should be set up in peace time, but it was found impossible to proceed with the scheme. Tentative enquiries were also made as to the assistance which the Ministry of Labour could give in regard to technical training, but these met with a discouraging response. Training arrangements with Local Education Authorities were limited to the technical training of Volunteer Reservists. Now that financial restrictions had been swept away, the chief obstacle in the way of the effective manning of the R.A.F. was this extreme shortage of all types of training facilities, a legacy of the earlier policy.

Great progress was made during the final year of peace towards effective national manpower planning. The Schedule of Reserved Occupations gave industry its first safeguard against indiscriminate recruiting for the Services at the expense of essential industry. Although the Schedule was extended and modified in the war years, its primary purpose of ensuring that 'workpeople required for the maintenance of necessary production or essential services are not accepted for service in which their skill and experience will not be used' persisted. Another revolutionary step towards national manpower planning was the enactment of the Military Training Bill in May 1939. So far as the Royal Air Force was concerned, the Military Training Act was of little help in building up an effective reserve as training difficulties precluded the speedy absorption of

militiamen, but the experience which was gained in administering the Act was useful when large numbers of National Servicemen had to be registered, interviewed and medically examined.

The technical complexity of aircraft and equipment continued to increase during the last year of pre-war expansion. This had already brought about a re-organisation of maintenance trades and, in July 1939, the Air Council decided to re-organise specialist officers, the requirement for whom had risen from 366 under Expansion Scheme 'F' to 2,088 under Scheme 'M'. This proposed reorganisation entailed a complete break-away from the earlier policy, one criticism of which had been that, although it had provided for specialist officers interspersing their service with periods of flying and specialist duties, this had never materialised, with the result that specialist officers had continued in specialist employment without relief. The scheme had, however, never really been given a chance to prove itself. It had allowed for a 100 per cent margin of trained specialist officers above actual requirements and, given a standardised expansion programme, the margin would have allowed reversion to flying duties at the appropriate stages. Continuing expansion without adequate warning had, however, prevented the achievement of such a margin, so that the production of specialists had lagged behind requirements and the margin had, in fact, been used to fill expansion posts.(1)

(1) A.M. File S.86443.

CHAPTER 4

REQUIREMENTS AND SUPPLY OF MANPOWER SEPTEMBER 1939 TO AUGUST 1943

The strength of the regular Air Force on the outbreak of war was 115,200 officers and men: 58,100 reservists and auxiliaries, who were immediately available, brought the total strength up to 173,300.(1) In addition, the 1,734 members of the recently formed Women's Auxiliary Air Force had been mobilised on 28 August 1939. It was from this small nucleus of regulars, reservists and auxiliaries that an Air Force of nearly 1,186,000, including over 173,000 members of the Women's Auxiliary Air Force, was built up by the summer of 1944.(2)

There was an abundance of volunteers for the Royal Air Force and the Women's Auxiliary Air Force immediately after the outbreak of war, and large numbers of men and women were enlisted or enrolled even though, for the majority, no training facilities were immediately available.(3) Instructions were given that R.A.F. recruits, for whom no accommodation could be found, were to be enlisted and sent home to await orders. They received airmen's pay and allowances during this waiting period, and their numbers grew so rapidly that recruiting had to be suspended temporarily on 21 September 1939.

The Deferred Lists

Recruiting was resumed on 28 September 1939, but on an entirely different basis. From then on, volunteers were sent forward for a medical examination and interview, and if accepted, they were duly attested. They were then sent home to resume their civil occupation until they were required. They received no R.A.F. emoluments until they were actually called up for service. This was the beginning of the R.A.F. Deferred Lists, which were maintained throughout the war and which provided a valuable pool of men available for absorption into the Service as and when they were required.(4)

Although a deferred list for volunteers for the W.A.A.F. would have been of great advantage during the first months of the war, the inability of the Air Ministry to hold members of the W.A.A.F. to their contract made any such scheme impracticable. The position changed, however, in April 1941, when W.A.A.F. personnel became members of the Armed Forces of the Crown, and in May 1941 a W.A.A.F. deferred list was opened.

The First Wartime Manning Programme

For the first few weeks of war there was no long term expansion programme on which to base manning requirements,

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(1) M.P.R. (40) 9.
(2) See Appendix 3 for details of the strength of the R.A.F. and W.A.A.F. from September 1939 to September 1945.
(3) See Appendix 22 for details of wartime recruiting organisation and procedure.
(4) For numbers on the Deferred Service Lists throughout the war, see Appendix 15.

beyond a broad assumption that the current strength of the R.A.F. would be doubled within three years. Although the Cabinet had decided, on 26 September, on an expansion based on the ultimate production of 2,300 aircraft a month[1] the composition of the resulting force and, hence, the requirements of personnel by categories, had not as yet been determined.

It was not until 9 November 1939, that the Director of Manning was able to give the Ministry of Labour and National Service a detailed demand for men for the first twelve months of war. It was then estimated that 99,829 would be required,[2] but the Director of Manning emphasised that this figure could only be regarded as provisional and liable to considerable amendment in view of the following considerations:-

(a) The Dominions were contemplating a substantial contribution in the matter of personnel, training and material, but very few details were yet available as to the extent of this contribution, and it was possible that in the first instance the Royal Air Force might have to supply the Dominions with personnel for instructional duties and maintenance in order to start and develop their organisations.

(b) Variations in the quantities, rate and type of aircraft production would have a tremendous effect upon manpower requirements.

(c) The extent to which it would be possible to substitute W.A.A.F. for R.A.F. personnel was not yet known. Allowance had been made for an element of woman labour, but the whole question was still under investigation.

(d) There was no experience on which to base allowances for casualties and other wastage.

(e) The intake of recruits would be controlled by the amount, and date of availability, of domestic and training accommodation.[3]

The National Service Act and the Schedule of Reserved Occupations

The National Service (Armed Forces) Act, which became law on 3 September 1939, imposed a liability for military service on all male British subjects aged between 18 and 41, who were normally resident in the United Kingdom,[4] but it was not until December 1939 that recruits from this source began to come forward. An important provision of the Act was that when a man was called upon to register for military service, he could express a preference for service in the Royal Air Force or Royal Navy rather than for service in the Army, and this

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(1) E.P.M.185
(2) It had been estimated in September 1937 that during the first year of a war, the R.A.F. would require an entry of 22,710 tradesmen and 67,000 non-tradesmen (D.M.17/1).
(3) A.M. File S.55208.
(4) The National Service (Armed Forces) Act, 1939. 2 and 3 Geo.6 Ch.81.

preference was recorded in the Military Service Register.(1) This privilege of expressing a preference was retained throughout the war despite tentative suggestions by the Ministry of Labour and National Service that it should be withdrawn. The Royal Air Force and the Royal Navy firmly adhered to the view that volunteers were worth considerably more than pressed men and as, throughout the war, the preferences expressed for the two Services were considerably in excess of their requirements, the system allowed a considerable element of selection to be exercised. The option allowed for expressing a preference for service was made even more valuable to the R.A.F. by the fact that aircrew personnel had to be volunteers.

In view of the great shortage of accommodation, the delay in effecting the National Service Act was welcomed by the Air Force which was already recruiting between 10,000 and 12,000 volunteers a month. Until December 1939, the men taken into the Service consisted solely of these volunteers and the 11,500 militiamen who had expressed a preference for R.A.F. service and who had not yet been called up when war broke out.

An indispensable administrative adjunct of the National Service Act was the Schedule of Reserved Occupations. The Schedule which had been introduced in January 1939 had been prepared on the basis of the requirements for the Services as ascertained in 1938. These requirements were in many respects incomplete and many essential factors were then not considered at all or were estimated on insufficient data. Apart from these facts, the Service requirements as then estimated were out of date by the summer of 1939, and the Ministry of Labour then emphasised to the Sub-Committee on the Allocation of Manpower in Time of War, the need for a review of the Schedule.(2) Consequently, a revised Schedule was introduced in September 1939. It differed mainly from its peacetime predecessor in that the ages of reservation were considerably lower in the wartime edition. It was designed to bring about the retention in industry of as many skilled men as possible and as late as July 1941, 3,500,000 fit men of military age were still retained in civilian life compared with 3,320,000 serving in the Armed Forces. The Schedule was under constant surveillance by a committee, representing Service, departmental and civilian interests, which had been appointed in February 1939, with the object of increasing its precision and its accuracy.

The Allocation of Entries to National Servicemen and Volunteer Recruits

When the National Service Act came into operation it became necessary to decide the proportion of recruits who were to be entered by voluntary enlistment and through the N.S.A. machinery respectively. It was agreed that, although it would be dangerous to accept a hard and fast decision as between conscripts and volunteers for all time, in existing circumstances it would be reasonable to allocate to volunteers 75 per cent of aircrew requirements and 50 per cent of ground personnel requirements.

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(1) See Appendix 7 for an analysis of Ministry of Labour registrations including details of R.A.F. preferences.
(2) N.S.(A.M.W) 2. (A.M. File S.55208).

It was agreed that the voluntary system of recruitment should be used to the maximum extent possible for aircrew personnel as the option for this type of employment and the urge to fight as a free agent rather than through the agency of the N.S.A. machinery were circumstances likely to produce the best material. Moreover, it had been considered desirable in peacetime to encourage the younger candidates for short service commissions and the main body of the peacetime cadre had been attracted at a young age through the medium of the Cranwell Cadet College: these considerations were felt to stake a claim for the R.A.F. to young men who were outside the scope of the National Service Act. It was accordingly decided to enter 75 per cent of aircrew requirements by voluntary enlistment and to reserve the remaining 25 per cent for N.S.A. entrants in order not to lose any good material which might present itself under the Act.

Different factors had to be considered when deciding what proportion of ground personnel should be entered as volunteers, the primary requirements being experience and skill of hand. Although the operation of the National Service Act had much to commend itself administratively, it was vital that the R.A.F. should continue to tap the supply of men who were either too young or too old to come within the age groups called up. It was to the older, skilled man that the Service would tend to look for potential supervisors and N.C.Os, while, in order to man the highly skilled trades, it would be necessary to attract young men who had recently left school and were receptive to training. It was accordingly agreed that entries for ground duties should be allocated equally to volunteers and to conscripts who had expressed a preference for Royal Air Force service.(1)

Measures to Minimise the Demand for Skilled Men

As early as the end of 1939 the shortage of skilled men to meet the expansion programmes of the Services and essential industry was causing disquiet, and in January 1940, the Air Member for Personnel summarised the steps which had so far been taken by the R.A.F. to ensure that its demands for skilled men were kept to the absolute minimum. He said that all skilled tradesmen who were surplus to current requirements were being invited to accept employment in industry until the Air Force needed them back in the Service. Balloon Command was being combed in order to release men with technical qualifications from non-technical employment. Manpower was being diluted with W.A.A.F. to the fullest practicable extent but the difficulty of providing accommodation both for housing and training women at R.A.F. stations made this a slow business. The system of deferred entry into actual service was designed to ensure that a man remained in productive industry until his services were required in the Air Force. Finally, the Air Force was not counting on drawing from industry any large proportion of its highly skilled men, but was already following the policy, which had been advocated by the Ministerial Committee on Economic Policy, of relying upon conversion of the semi-skilled to the most highly skilled trades and replacing the semi-skilled personnel by men trained in the Air Force.(2)

(1) A.M. File S.59083.
(2) W.P.(G) (40) 9.

An Increased Manpower Demand

The Director of Manning informed the Ministry of Labour and National Service in April 1940, that the Royal Air Force manpower requirements were considerably greater than had been estimated in the previous November. Although greater definition as to the scope of future Air Force expansion was possible in April 1940, a number of factors continued to make any forecast highly speculative. The revised demand, which was based on an expanded force, covered the period from April 1940 to March 1941 and was for 137,455 men, including 19,350 for aircrew duties. This estimate was based on new requirements, but it had not been considered from the point of view of whether training facilities were available to cope with the entry, and it was possible that the forecast might need to be adjusted having regard to existing training facilities. The estimate included an element for the replacement of casualties but made no allowance for the supply of personnel from Dominion sources other than crews.(1)

Overseas Recruiting

Soon after the outbreak of war the advisability of launching a large scale recruiting drive for British subjects in the Colonies and foreign countries was discussed at the Air Ministry, but as there was as yet no shortage of manpower in the United Kingdom the project was dropped. Owing to changing war conditions and to the growing desire of many British subjects overseas to take an active part in the war, the question was reconsidered in the spring of 1940, and it was then decided to encourage overseas volunteers for aircrew duties and skilled tradesmen of Groups I and II. This was the beginning of the Air Ministry Overseas Recruiting Scheme whose work was later merged into that of the Ministry of Labour's Overseas Manpower Committee.(2)

Effects of the Fall of France

Until May 1940, the Services and industry worked steadily towards their targets. Then came the fall of France and the evacuation of British forces from the Continent. Losses had to be made good urgently and, against a background of defence measures, blackout and air raids, the build up of the Armed Forces and industry continued at a greatly increased tempo. It had taken approximately 200 days to register the first two million men; it took 40 days to register the next two million. In July 1940, the Schedule of Reserved Occupations was relaxed in order to permit men and women in reserved occupations to join the Armed Forces as volunteers, if they were unemployed, or for two months had not been employed in a reserved occupation, unless the Ministry of Labour and National Service were satisfied that there were existing, or forthcoming, vacancies on important work for which the men or women were suitable.(3) This relaxation of the Schedule was welcomed by many would-be volunteers who had been retained in industry against their will.

One of the first effects of the collapse of France on R.A.F. manning policy was in connection with the defence of

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(1) A.M. File S.55208
(2) For details of the overseas manpower contribution to the Royal Air Force see Chapter 10.
(3) D.T.C.(M.P)(48) 18.

airfields. On the outbreak of war the Army had assumed responsibility for the ground defence of airfields and 34,000 troops were employed on guarding these and other vulnerable points. The R.A.F. continued to accept the responsibility for defence against low flying aircraft and by mid-1940 some 6,000 gunners were employed on these duties. After the Dunkirk evacuation the Army was in no position to continue this defence commitment and the Air Force began to assume responsibility. During the twelve months ending in June 1941, the Air Force found it necessary to recruit and train between 35,000 and 40,000 airmen for this purpose.(1) Numbers continued to grow, and when the R.A.F. Regiment was set up in February 1942, it absorbed 75,000 men in the United Kingdom alone. It later absorbed another 10,000 men overseas.

First Signs of a National Manpower Shortage

The extensive withdrawals from civilian life into the Armed Forces in the summer of 1940 took place at the same time as urgent demands were being made by the munitions industry for increases in their labour force to meet the greatly increased production that was required from them in order to arm and equip the Services. The War Cabinet accordingly appointed a Manpower Requirements Committee, under the chairmanship of Sir William Beveridge, to see whether the Government's programme could be carried out with the available supply of manpower and to determine what types of labour were required. The Committee held their first meeting on 29 August 1940.(2) In order to complete their survey, the committee needed estimates of the manpower requirements of the Services, both for tradesmen and for men for general service, and they therefore set up a sub-committee to investigate the requirements of the Services.(3) This sub-committee held their first meeting on 3 October, when the Services agreed to provide details of their requirements for the period from September 1940 to December 1941. The gross demand for the Royal Air Force was for 351,000 men including a minimum of 55,760 skilled tradesmen.

The Committee's first interim report, which was issued in November 1940, gave a provisional indication of the scale and nature of the manpower problem in relation to the conduct of the war and the military and munitions programme. The current military programme required a net addition in the sixteen months ending in December 1941, of 1,741,000 men of military age and about 75,000 women for the Defence Services, but the Committee felt unable to deal with the problem of meeting these requirements until they had made a complete survey of the requirements in civilian employment.(4) The chairman stated, however, that of the 8,432,000 men of military age, more than 5,000,000 were then being excluded from compulsory military service, and that the need for the call-up of at least a substantial proportion of the young men of 18 or 19 years and for a substantial revision of the Schedule of Reserved Occupations was clear.(5)

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(1) A.C.38(41).
(2) M.P.R.(40) 1.
(3) M.P.R.(S) (40) 1.
(4) P.X. (40) 68.
(5) P.X. (40) 69.

In their second report, issued in December 1940, the Manpower Requirements Committee stated that if the contemplated programme of military and munitions expansion was to be carried out, about 4,000,000 men of military age would have to be withdrawn from civilian life between June 1939 and December 1941. To this end, the committee recommended a revision of the current arrangements whereby male manpower was allocated between the fighting forces and civilian life mainly by a Schedule of Reserved Occupations with age limits. These arrangements had been indispensable in the first year of war, but they now required development and refinement. In particular, the committee recommended that the authority charged with framing the plan for manpower should be free, in addition to making the inevitable large changes in the reservation ages, to propose changes:-

(a) In the principle of reservation, so as to make reservation depend, not upon registered occupation alone, but also upon the importance and nature of the work being done.

(b) In the existing treatment of men of 18 and 19 years of age.(1)

The committee suggested that the manpower plan should make provision for securing to the Services men with special qualifications for particular types of work such as that of tradesmen in all three Services and of air pilots and observers. They also proposed that the calling up of men to the Services should be subject to the progress of the equipment programme, and that men called to the Services should, subject to the exigencies of their training, be freely available for tasks of civilian defence in Britain and to meet other urgent requirements. Finally, the Committee emphasised that armaments rather than armies were the bottleneck.(2)

Amendments to the Schedule of Reserved Occupations

It was not long before the first of the Manpower Requirements Committee's recommendations were put into effect.(3) On 2 January 1941, the Manpower Priority Committee decided that the Schedule of Reserved Occupations should not apply to volunteers for pilot or observer training. A similar concession was made in February 1943, for volunteers for training as other categories of aircrew.(4)

A stage had been reached by the spring of 1941 where it was essential that men and women employed in non-essential industries should either be transferred to essential work or be made available for the Services. A new Schedule of Reserved Occupations and Protected Work was accordingly published in April 1941. For many occupations the new Schedule fixed two ages of reservation - a lower age for men

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(1) Formally, men of 18 and 19 were in the same position as the men of the upper age groups, liable to register and serve but not yet required to register. But there were special pledges in regard to them which made a decision to call them up for general service rather different in substance from a similar decision about the older men.
(2) M.P.R. (40) 22.
(3) In January 1941, the Manpower Requirements Committee was merged with the Manpower Priority Committee which continued under the title of the Manpower Committee.
(4) A.M. Files S.67930 and S.85355.

employed in 'protected' establishments and a higher age for men employed in 'unprotected' establishments. Approximately 100,000 firms were classified as 'protected' and more than 600,000 men qualified for reservation at the lower age.

In order to minimise the dislocation of industry, the document included provision for the progressive raising of ages of reservation for many occupations - three stages ('A', 'B', and 'C') and trades were lettered in the estimated order of importance to the war effort, the least important being classified as 'A' and being the first to be dereserved. The results of the scheme for dereservation by three stages as regards the supply of men for the Armed Forces were, however, disappointing. The main reasons for the failure of the scheme were alterations in many ages of reservation in favour of industry, the deferment of many men who became dereserved, and the transfer of dereserved men to other work where they again secured reservation or deferment of call-up.(1)

Revised Manpower Requirements for the First Two Years of War.

The Royal Air Force manpower requirements for the first two years of war had been estimated at 219,000 in November 1939,(2) but by the end of the first twelve months of war 243,000 men had already been enlisted. The nation's man and woman power resources were still adequate to meet the needs of the Services and industry and there was as yet no control over the extent of the Services' intakes beyond the Schedule of Reserved Occupations.

Meanwhile, the position of the United Kingdom after the fall of France had necessitated a greater expansion of the Armed Forces, and R.A.F. manpower requirements rose accordingly. An intake of 563,000 during the first two years of war was now required, thus leaving some 320,000 to be entered during the second year of war. The new demand, which the Director of Manning warned might have to be increased, was based on a new expansion programme, Target Force 'A', which was drawn up in August 1940.

Target Force 'A' was one of the first of the series of wartime targets for R.A.F. expansion. The Expansion and Re-equipment Committee had laid down certain targets, based on the output of aircraft and trained personnel, which might be achieved by certain dates. Two targets were drawn up in August 1940:-

(a) A force related to August 1941, to be known as Target Force 'A'.

(b) The subsequent expansion of the above force. This was subdivided into Target Force 'B', which excluded Dominions and unforeseen commitments, and Target Force 'C', which included Dominions and unforeseen commitments.(3)

The Prime Minister's First Manpower Cut - March 1941

In February 1941, further expansion was planned and the resulting force was named Target Force 'D'. To provide for

(1) D.T.C. (M.P.) (48) 18.
(2) A.M. File S.55208
(3) R.A.F. Development Committee, 1st Mtg., 17 September 1940.

this force, the Director of Manning forwarded a revised manpower demand for 1941 to the Ministry of Labour in February 1941. This revised demand was for 308,500 men, including 35,000 for aircrew training, who were required in order to bring the strength up to the planned establishment of 750,000 men and 50,000 women on 1 January 1942.(1)

This programme prompted a criticism from the Prime Minister who declared that the ratio of ground services to first line air strength was deplorable and getting worse every day. He emphasised the need for making every effort to economise in manpower in view of the serious shortage and concluded by asking for the total establishment to be cut by 50,000 men and for an additional 50,000 women to be substituted for men.

As a result, the demand for the year was modified to 35,000 pilots and observers, 207,000 tradesmen and 97,000 women for the W.A.A.F. The Establishments Committee were given the task of investigating the directions in which the cuts demanded by the Prime Minister could be made.(2) Their investigations made possible a reduction of some 600 officer posts and 14,300 airman posts. A further 500 officers were combed out by an arbitrary cut of 10 per cent in May 1941 and another 10 per cent cut in June 1941, which was made in Headquarters and Group staffs on the order of the Chief of the Air Staff. In order to effect the whole of the 50,000 cut ordered by the Prime Minister, an arbitrary cut of between 4 per cent and 5 per cent in establishments was required in addition to the savings already made.

The Prime Minister had called for the addition of 50,000 more women to the Women's Auxiliary Air Force, but the development of the W.A.A.F. had so far been retarded by the inability of the Service to absorb all the volunteers, owing to a lack of building and training facilities and of suitable stations and clothing, and by the high rate of wastage owing to the Service's inability to hold the women to their contract. In view of the vital need for greatly increased substitution and of the Premier's call, W.A.A.F. service was put on a more realistic footing in April 1941, when Servicewomen became members of the Armed Forces of the Crown under the terms of the Defence (Women's Forces) Regulations. The wastage rate then dropped and the substitution of women in trades requiring a long and expensive training became worthwhile.

Target Force 'E'(3)

While the savings demanded by the Prime Minister were being made, manpower requirements were rising. In March 1941, the bulk demand for that year rose from 308,500 to 324,500 owing to a clearer definition of the requirements of wireless and radio mechanics.(4)

At the same time as the manpower considerations were weighing upon the R.A.F., the Prime Minister himself acknowledged that bombing was the only means yet devised of bringing the war to a successful conclusion.(5) New R.A.F. planning

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(1) A.M. File S.55208.
(2) A.C. Paper 23 (41).
(3) C.W.E./E/26.
(4) A.M. File S.55208.
(5) W.P. (41) 69.

was based on this assumption and in May 1941, Target Force 'E' emerged. Based on the simultaneous availability of pilot and aircraft, this new target force aimed at the provision of some six hundred and sixty squadrons, including a force of 4,000 first line heavy bombers, by the end of March 1943. Royal Air Force manpower requirements were accordingly recalculated in July 1941, when it was estimated that for the period from July 1941 to March 1943, it would be necessary to enter the following personnel:-

Men	593,500	(1)
Women	157,500	
	751,000	

These figures were based on a programme which had not yet been approved by the War Cabinet and could, therefore, only be regarded as provisional. By the time that the manpower demand for Target 'E' for the period under discussion was actually submitted to the Ministry of Labour and National Service in October 1941, a number of factors had caused the figures to undergo considerable modification.

A Reduction in the Wastage Margin

At the beginning of the war, separate wastage rates in respect of ground personnel had been estimated for maximum, intensive and sustained efforts. That for sustained effort had amounted to 2 per cent per month of the strength and had been adopted. After some months, however, it had become evident that wastage was not occurring at this rate and the constant was accordingly reduced to 1 per cent per month.

An examination of the actual wastage of ground personnel from the outbreak of war until 1 June 1941, was made in August 1941, at the instance of the Deputy Air Member for Supply and Organisation who was far from satisfied that the postulated wastage rate of 1 per cent per month was realistic.(2) This examination revealed that losses to ground crews from all causes during that period amounted to approximately 20,000, representing an average of 0.29 per cent per month.(3) This was less than one third of the postulated rate. As a development in the war might materially affect this rate it was considered inadvisable to assume that the wastage experienced to date would necessarily apply to the future. The criterion was whether it was not preferable to err on the side of caution in personnel planning and to budget for a higher wastage rate even though it might not in practice be required.

In view of the manpower position and outlook and of the examination to which R.A.F. manpower demands would be subjected,

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(1) The demand for 593,500 men was made up as follows:-

Technical and Professional Officers	9,400
Administrative Officers	14,600
Aircrews	179,500
Groundcrews	390,000
Total	593,500

(2) A.M. File C.S. 10261.

(3) This figure included war casualties, releases to civil life, and transfers to the other Services.

the Director of Manning decided in August that, for planning purposes, the postulated wastage rate for ground staff in the R.A.F. should be reduced forthwith to 0.5 per cent per month, and that the R.A.F. should rely upon the margin of 10 per cent which was allowed for unforeseen contingencies to safeguard the Service against a higher actual wastage rate. The strength of ground personnel under Target 'E' was expected to rise to 950,000 and the wastage that would be allowed for in the twenty-one months ending in March 1943, using a constant of 0.5 per cent, instead of 1.0 per cent would be approximately 77,500 men.(1) Thus, a lowering of the constant from 1.0 per cent would enable the R.A.F. to reduce its demand for men by 77,500 men.

Manpower Requirements for Target 'E'

This recalculation of the wastage rate for ground crews was not the only factor which caused a modification of the manpower demand for Target 'E' during the summer of 1941. Two of the largest fluctuations were caused by an expectation that the Dominions would provide some 25,000 tradesmen for Article XV squadrons, thus releasing an equivalent number of R.A.F. personnel, and by an increase of 1,400 aircraft on the original target figure, which was expected to necessitate the provision of an additional 40,000 ground personnel.

In September 1941, manpower requirements for the R.A.F., in order to implement Target Force 'E', were stabilised at the figures which were presented to the War Cabinet in the following month. The ultimate personnel establishment for Target 'E' was then stated to be 965,900 men and 194,500 women, a total of 1,160,400. In order to bring the strength up to that figure by the target date of 31 March 1943, it would be necessary to enter into immediate service between September 1941, and the end of March 1943, approximately 435,750 men and 183,500 women. War wastage was calculated at 0.5 per cent per month for R.A.F. ground personnel, 1.0 per cent per month for W.A.A.F. officers and 1.5 per cent per month for airwomen. If the deferred lists were to be kept at their existing level, however, it would be necessary to increase to 484,000 men and 190,000 women the number of attestations required during the period. On this basis, an entry of 247,000 men and 140,000 women would be required during the twelve months ending in June 1942.(2) It was manpower requirement for this period which the War Cabinet were due to discuss in October 1941.

National Manpower Distribution for the Period from July 1941, to June 1942.

The total manpower demand of the Services for the twelve months ending in June 1942, was for 829,000 men and 462,000 women. Under existing arrangements, however, the available supply of men was only 468,000, so that, if requirements were to be met in full, a further 361,000 men would have to be found from among the 3,500,000 fit men aged 18 to 40 who were still in civil life. The Prime Minister discussed various aspects of the manpower problem with the

(1) Of this anticipated wastage, it was estimated that 62,000 would be returned to civil life, of whom half would be capable of essential work in industry.
(2) W.P. (41) 247.

Ministers primarily concerned. He suggested in November 1941, that, in view of the serious national manpower shortage, which had been made more acute by undertakings to Russia, which alone necessitated an additional 100,000 men in industry, the Air Force should reduce by 50,000 men its demand for the period under review. The demand for 247,000 men was already 40,000 less than the provisional requirement for Target Force 'E' owing to a revision of the potential wastage rates and a recalculation of requirements as a result of the detailed expansion programme. Nevertheless, the Air Ministry agreed to cut their demand for men by 47,000 to 200,000 mainly by reducing the margin for unforeseen eventualities.

This reduction in the Air Force demand did not automatically reduce by the same amount the gross numbers to be supplied to the Services during the period, for of this 47,000 some 26,000 had already been selected for the Air Force and experience had shown that these men could not be diverted to the Army without causing serious discontent. The Civil Defence demand had been cut by 30,000 men at the same time as the Air Force had been cut, so that the gross number of men to be supplied to the Services was now 778,000. To meet this demand, a further 310,000 men would have to be found from among the fit men still in civil life.

In view of the comparative failure of the scheme for raising the ages of reservation in three stages and of the arrangements for distinguishing between protected and unprotected work, it was clear in October 1941, that an entirely new policy for reservation in industry was essential if the manpower requirements of the Services for 1942 were to be met. It was generally accepted that the system of block reservation or deferment had served its purpose and, now that the shortage of manpower had become acute, must be replaced by a system under which each case would be reviewed individually. It was decided, therefore, to end the system of block reservation by raising the ages of reservation for practically all occupations by one year a month from January 1942 onwards, individual deferment being granted only to men engaged on work of vital national importance.

These arrangements were made public in a new version of the Schedule of Reserved Occupations published in December 1941. This Schedule also introduced a new principle that no unreserved man under the age of 25 could any longer have his calling up deferred except for men appearing in a short list of occupations. At the same time, the restrictions on volunteering for the Service were extended to cover men under deferment as well as reserved men.(1)

A heavy strain would be thrown upon industry by the withdrawal of these men into the Forces and by the dislocation involved in the transfer of workers from the less essential to the more essential industries which would occur at the same time as the implementation of an expanded programme of aircraft production. In these circumstances it was suggested that, in order to preserve a due balance between the needs of the Forces and those of industry, further measures should be

(1) D.T.C. (M.P.) (48) 18.

taken to relieve the strain which would otherwise be thrown upon industry. It was therefore proposed that young men should be called up at 18½ years instead of 19 years; that the Air Force intake of young men from the whole of the 1923 class should be limited to a maximum of 52,000 instead of the 82,000 which would have been allocated to them under the existing arrangements.(1) The War Cabinet approved the above proposals at a discussion of the manpower position on 10 November 1941.(2)

The National Service (No. 2) Act - December 1941

The National Service Act which became law on 18 December 1941 was an attempt to stave off national manpower bankruptcy and was considerably wider in its scope than the Act of September 1939, which had only legalised the conscription of men between the ages of 18 and 41. The Act of December 1941, imposed on all persons of either sex a liability to national service, whether in the Armed Forces, in Civil Defence, in industry, or otherwise. As regards compulsory service in the Armed Forces or Civil Defence Forces, the age limits were altered to 18-51. Another clause made possible compulsory transfers of personnel from one Service to another: previously it had been legally a case of discharge on one day and call up on the next, the Ministry of Labour having issued the necessary papers in advance.

The most revolutionary clause of the Act was that which legalised the conscription of single women for the Auxiliary Services or Civil Defence Forces, and it was only after considerable controversy that the War Cabinet had agreed to such a step. The Secretary of State for Air and the First Lord of the Admiralty both opposed the proposal on the grounds that it would cause dissatisfaction among the men in the Services, but the Prime Minister emphasised the need to replace men by women wherever possible in certain non-combatant military jobs. The majority of ministers agreed and the proposal was adopted. It was agreed that no women should be posted to a combatant role unless they volunteered and that married women should not be compelled to join the Services although they could volunteer. The Secretary of State for Air urged that women conscripted for the Services should be allowed to opt for the Service of their choice, but the War Cabinet felt that this would be impracticable especially as the real difficulty throughout had been to find enough recruits for the Auxiliary Territorial Service. Women outside the proclaimed age groups would still be able to volunteer for the Service of their choice, but the Ministry of Labour were instructed to allot conscripted women to the Women's Royal Naval Service, the Women's Auxiliary Air Force and the Auxiliary Territorial Service on the basis of the needs of those Services.(3)

Target Force 'E' (1 January 1944) Revised (4)

Owing to the diversion to Russia of American planes originally destined for the United Kingdom and to the entry of

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(1) W.P. (41) 257.
(2) W.M. (41) 110th Conclusions.
(3) W.M. (41) 121st Conclusions 28 November 1941)
(4) C.W.E/E/35.

the United States into the war, the supply of aircraft to the R.A.F. was, by the end of 1941, lagging behind that of men trained to fly and maintain them. Because of this, and for other reasons, there had arisen by November 1941 a surplus of 52,000 tradesmen, of whom 30,000 were released to Industry in the following months.(1) As a result of this shortfall in aircraft deliveries, the expansion programme had to be slowed down and the target date was put back to 1 January 1944. This slowing down of the programme enabled the Air Council to cut down, in December 1941, their anticipated demand for men and women during 1942 by some 60,000 and 20,000 respectively. These reductions were to be spread equally over each half of 1942.

Prior to the reduction of 80,000, it had been estimated that the intake of men into effective service in the first half of 1942 would be 82,000. If a reduction of 30,000 were made, the intake would be about 50,000. Towards this 50,000 there were already 50,000 men on the R.A.F. deferred service list. It would be necessary to supply the R.A.F. with 30,000 men for the deferred list so that it might stand at 30,000 at the end of June.

Target Force 'E' was revised in early 1942 to allow for changes in the rate of aircraft production, and manpower requirements were revised on account of this and of a number of developments within the Service. The target strength of ground personnel for 1 January 1944, was now 995,000 men and 217,650 women, and an entry of 580,000 men and women during 1942 and 1943 was required to meet the demands for flying and non-flying personnel.(2) In these calculations, allowance was made for the numbers to be met from the resources of the Dominions and Allied countries so that figures reflected a net demand upon the resources of the United Kingdom. The crew demand was expressed in terms of pupils to be fed into the training organisation; failures in the process of training would revert to ground employment, thus offsetting the demand for ground personnel. Conversely a proportion of the crew demand would be met by personnel entered initially as ground personnel and trained as tradesmen.

The Air Member for Personnel asked the Air Council in June 1942, for authority to present to the War Cabinet a revised demand for 295,500 men and women for the current year, but made it clear that the new demand could not be regarded as firm in view of the uncertainty of the effect on numbers of the revised training programme and of recent events in connection with the visit of General Arnold and Admiral Towers to London to discuss future supplies of American aircraft to the R.A.F. The Air Council decided that in these circumstances it would

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(1) For further details of the releases to Industry see Ch. 8.
(2) The demand was as follows:-

		1942	1943	Total
Men	Crews	67,500	79,500	147,000
	Ground Staff	132,000	151,000	283,000
	Total men	199,500	230,500	430,000
Women		96,000	54,500	150,500
Total Men and Women		295,500	285,000	580,500

be wise to adhere to the manpower figures already authorised by the Cabinet until firmer figures of requirements were available. In the meantime, work on the revised calculations was to proceed and the requirement for Works Squadrons was to be checked.(1)

Target Force 'G'

Under the Arnold/Towers/Portal Agreement which was signed in Washington on 21 June 1942 the United States agreed 'to continue in 1943 the allocation of the necessary aircraft to meet attrition in British squadrons using American aircraft operational on 1 April 1943, and in their supporting Operational Training Units.' So far as further expansion was concerned, therefore, the R.A.F. had to depend entirely upon the output of British aircraft factories, thus making another slow down of expansion inevitable. This agreement in itself would have necessitated a new Target Force and a new expansion programme for the R.A.F. This need was accentuated by the publication of a new programme of British aircraft production on 1 July 1942 and by a decision that Australia, New Zealand and Canada should be regarded as being within the American Sphere of responsibility. The Air Staff accordingly prepared a new target force (Target Force 'G') which aimed at a force of some 2,000 fewer aircraft than its predecessor.

Manpower Requirements for Target Force 'G'

Although Target Force 'G' was 10 per cent smaller than Target Force 'E' (C.W.E/E/26) its requirements in manpower were 20 per cent greater. For the build up and maintenance of Target Force 'E' the War Cabinet had authorised an R.A.F. intake of 425,000 men and women for the eighteen month period July 1941 to December 1942 inclusive. Approximately 314,250 of these had been entered by 30 June 1942, thus leaving a balance of 110,750 only for the second half of 1942 compared with a demand, on the basis of Target 'G' requirements, of 237,700.(2) This revised demand was based on the assumption that the 30,000 men on loan to the aircraft industry and to other Government departments would be returned by the end of December 1942.(3) If they were not, the demand would have to be increased proportionately.(4)

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(1) A.C. Mtg 10 (42), 2 June 1942.
(2) Details of the demands were as follows:-

	Men	Women	Total
Original demand (Target 'E') (1.7.41 - 31.12.42)	345,000	160,000	505,000
Less Cut (December 1941)	60,000	20,000	80,000
Cabinet authorisation	285,000	140,000	425,000
Numbers entered (1.7.41 - 30.6.42)	222,000	92,250	314,250
Balance for July-December 1942	63,000	47,750	110,750
Demand Target 'G' (1.7.42 - 31.12.42)	181,700	56,000	237,700
Increase	+ 118,700	+ 8,250	+ 126,950

(3) A.C. Paper 49 (42).
(4) For further details of the loans of airmen to essential industries, see Chapter 8.

The explanation of this increase in manpower requirements was to be found in the fact that the complicated techniques demanded by progress made in scientific aids and the development of war aviation had forced a revision in the establishments of the Air Force in general and in the training organisation in particular. This revision was reflected in the following increases in manpower requirements:-

Revised training policy	72,000
Repair Organisation Overseas	30,000
10 per cent Pool Overseas	25,000
Works Squadrons, etc.	16,000
Airborne forces	14,000
Radio Personnel	11,000
Miscellaneous	16,000
	184,000

This increased manpower demand was discussed by the Air Council on 19 August 1942,(1) and the Chief of the Air Staff said that, in his view, units would have to make do with less than their theoretically correct establishments and everyone would have to work much harder to make up for the deficiencies. The Air Member for Supply and Organisation stated that his establishments organisation did normally lay down establishments which were within 5 per cent one way or the other, of what was necessary for particular units. He could not agree that there was any general over-establishment and stated that if cuts were essential in view of the acute manpower situation, they would have to be made by an arbitrary overall reduction enforced by the Air Council. The Secretary of State said that he found it difficult to accept an increase of 184,000 men and women for the ultimate (1 April 1944) establishment for Target 'G' considering that it would have many less aircraft than had been planned. The Lord President was expected to examine the additional requirement of 126,950 men and women in the near future, and in anticipation of this Sir Harold Howitt was asked to examine the manpower requirements with the Air Member for Supply and Organisation and the Air Member for Training. The Air Council decided to approve the new manpower demand subject to the results of this examination and to the Defence Committee's decision to implement Target Force 'G'.

The Results of Sir Harold Howitt's Manpower Survey

Sir Harold Howitt stated in a memorandum dated 31 August 1942,(2) that his survey had shown him that a reduction in the personnel requirements as then estimated could only be achieved by:-

(a) Reconsideration of policy decisions, and

(b) Improvements in the method of interpretation of these decisions in terms of essential manpower to carry them out.

With regard to (a), Sir Harold recommended that the following broad policy considerations called for review as they so greatly affected the manpower demand as a whole: the

(1) A.C. Mtg. 13 (42).
(2) A.C. Paper 57 (42).

length of training courses; the introduction of new types of schools; the location of schools; dispersal; shifts; hours of work and leave; the degree of supervision and administration; specialised requirements; the degree of control over Government property; the number of servants allowed to officers. With regard to (b) he agreed that the establishments laid down by the R.A.F. Establishments Committee were being continually reviewed and amended and that 750 amendments in a week was not an unusual occurrence, but he felt that there was insufficient independent check on the manpower requirements of the expert users such as the Director General and Inspector of Signals and the Director of Servicing Maintenance and that before demands from Directorates such as these were implemented an estimate should be made of the extra manpower required. He recommended, further, that all policy decisions, especially those taken at Air Council level, should be taken in the light of the extra manpower required. Sir Harold also recommended that an arbitrary cut in non-flying or non-technical establishments should be considered, reducing them in effect to an austerity basis.

Sir Harold recognised that certain of these points were long term recommendations and that the immediate problem was to decide whether to press the Lord President for an increase of 126,950 men and women during the current year. He indicated the following cuts to the extent of 60,000 which he considered might reasonably be made as at 1 April 1944:-

O.T.U's Reversion to two shift basis of maintenance	2,000
A.F.U's Reversion to two shift basis of maintenance	2,500
Cut in allowance for non-effectiveness in technical trades	3,000
Overseas squadrons - possible reduction in establishments	3,000
Repair Organisation overseas - possibility of employing civilians	20,000
Possible reduction of Overseas Pool	5,000
Reduction in R.A.F. Regiment	21,000
Balloons - change in rate of substitution	2,000
Bicycle maintenance	1,500
Total	60,000

These recommendations were discussed by the Air Council on 8 September 1942.(1) The Air Member for Personnel emphasised the urgent need for approval of the manpower demands as the current demands would be fulfilled within about three weeks. The Air Member for Supply and Organisation then observed that the manpower requirements had already been stated to the Lord President and to the Ministry of Labour, and that the position was now being examined in order to decide what cuts could be made if, as seemed likely, the Royal Air Force were asked to revise their demand. The Council finally agreed to wait until Sir Harold Howitt had concluded his discussions with A.M.P., A.M.S.O., A.M.T. and V.C.A.S. on major points of principle and then to consider what offer should be made to the Lord President.

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(1) A.C. Mtg. 14 (42).

The Prime Minister's Cut - September 1942

The expected request for a reduction in the R.A.F. demand for an additional 126,950 men and women during the second half of 1942 came in September in the form of a minute from the Prime Minister, in which he asked for a cut of 50 per cent in the additional demand. The position was that the Service Departments and the Production Departments had, between them, asked for twice as many men and women by the end of 1943 as were, in fact, available, so that heavy cuts all round were inevitable. Previously, the R.A.F. had been able to cut without loss of efficiency, but this was thought to be no longer possible. Nevertheless, at their meeting on 6 October 1942,(1) the Air Council agreed that an estimated reduction of 65,000 in the manpower demand should be given, at the same time making it clear that this figure assumed that all the personnel loaned to industry would be returned to the Air Force. The R.A.F. was thus left with an authorised intake of approximately 172,700 for the second half of 1942, instead of the 237,000 originally demanded in order to meet Target Force 'G'.

Sir Harold Howitt's recommendations were expected to yield a saving of some 60,000 men and women by the beginning of April 1944. The effect of this on the manpower requirement for the last six months of 1942 was to facilitate a reduction of 45,000, i.e. from 126,950 to 81,950, so that if the Prime Minister's cut was to be fully implemented, a further saving of approximately 17,000 was required. It had been contemplated that the full 50 per cent reduction could be achieved only at the price of a loss in efficiency and that an overall cut in establishments might have to be imposed. As a result, however, of a further detailed review by the R.A.F. Establishments Committee, additional reductions in establishments amounting to 25,575 were approved,(2) but it was agreed that any surplus greater than the saving demanded should not be declared for the time being owing to the need to retain a small margin in hand to cope with sudden operational requirements. The Vice Chief of the Air Staff emphasised that other methods of achieving large scale contributions to the manpower supply should be investigated before a saving of more than 50 per cent was offered, and mentioned the possibility of making further use of American manpower and of securing large numbers of men from the Commonwealth. He drew attention to the fact that the shortage of women was such that it would be uneconomic to continue W.A.A.F. substitution in any case where more women than men were required for the work.(3)

The National Manpower Situation in the Autumn of 1942

A meeting of Ministers was held under the chairmanship of the Lord President on 30 September 1942, to make provisional arrangements for the distribution of manpower to the Services during the eighteen months ending in December 1943, pending the results of the Minister of Labour's Manpower survey. At this meeting it was made clear that the demands of the Services and

(1) A.C. Mtg. 16(42).
(2) A.C. Paper 67 (42).
(3) Manpower meeting held on 2 October 1942, and attended by Sir Harold Howitt (chairman), V.C.A.S., A.M.P., A.M.T., Deputy A.M.S.O., D. of M., and A.U.S.(O).

Supply Departments for 1½ million during that period would be impossible to meet. The nation had reached a stage where the non-essential industries could scarcely be cut any further so that henceforth there would have to be a balance between essentials. The position was summarised by an Air Council letter to all Commanders-in-Chief in October 1942, in which was expressed the concern of the Government at the general manpower situation. The letter stated that while the demands of the Services for personnel to implement approved expansion programmes had, so far, been successfully met, this had been accomplished only with the greatest difficulty and at the cost of the withdrawal of men from essential industry. The end of this source of supply was in sight and a drastic cut in requirements was imperative. The Commanders-in-Chief responded handsomely to this letter and were able to carry on in spite of considerable deficiencies.

Two official reports presented in October 1942, provided a clear indication of the country's critical manpower situation. One of these was that of the Cabinet Committee(1) which had been appointed by the Prime Minister in the preceding July to examine the establishments of the three Services. The object of the examination was to reduce the overall number of men in non-combatant roles in order to facilitate any necessary increase in combatant troops. Having examined the Service establishments, with particular emphasis on those of the Army, the Committee reported that they could see no alternative to fixing a manpower total for each Service, in the light of competing demands on manpower and of strategic requirements, leaving each Service to make the best possible use of its resources within that limit. Decision on these lines would be a matter for the War Cabinet, who would have to decide not only the ceilings respectively to be allocated to each of the three Services, but also, in broad terms, the number of fighting units to be got out of these allocations(2)

The Minister of Labour's Manpower Survey

The second indication of the country's manpower position to be given in October 1942, was the Minister of Labour's Manpower Survey(3). This showed that mobilisation had gone further by October 1942, than it had by the end of the first world war, but that even more men and women would be required if the demands of the Services and essential industries were to be met.(4) A position had been reached in the mobilisation of the man/woman power of the country where, on the basis of the latest demands, there were not sufficient men and women to meet the demands of the Services and at the same time those of the munitions industry and maintain the necessary civilian standards and amenities. A final decision on the balance of manpower was not possible until a closer correlation had been achieved with the United States on production and manpower policy. Meanwhile, it was necessary to decide what number of

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(1) The Committee was composed of Mr. Attlee (chairman), Sir Stafford Cripps and Mr. Eden.
(2) W.P. (42) 496.
(3) L.P. (42) 235.
(4) By mid-1942, 30.1 per cent of the population were in the Forces, Civil Defence and munitions compared with 27.8pe per cent in 1918, 17.7 per cent in other essential industries compared with 15.3 per cent.

men and women were to be recruited to the Forces, whether recruitment was to be at the expense of munitions and the existing civilian standards, or whether munitions production could be maintained by a smaller labour force with the development of greater rationalisation in production and economy in the use of manpower, or, finally, whether the expanded demands of the Service should be cut.

The position was that if the Forces had not been making increased demands, it would have been just possible to meet their requirements and provide the necessary personnel to fulfil the existing munitions programme, although this would have involved the mobilisation of a large number of women for part time work. All three Service Departments were, however, asking for increased numbers of men and women, and their combined demand for the eighteen months period from July 1942 to December 1943, amounted to 1,288,000 men and 303,000 women.(1)

At a meeting held on 11 November 1942, the Lord President focused, for consideration by the War Cabinet, the issues arising from the Minister of Labour's Manpower Survey. He said that the total requirements of the Forces and the munitions industry for the period from July 1942 to December 1943 inclusive, amounted to 1,573,000 men and 938,000 women, a total of 2,511,000, whereas the total supply was unlikely to exceed 1,600,000. The gap between the supply and demand was, therefore, of the order of 900,000 men and women. The reason for the extent of this gap was that expectations with regard to the delivery of equipment from the United States had not been fulfilled. But for this, the munitions industry, far from requiring large additions to its labour force, might have been able to bear some reduction. The gap was so large, however, that a substantial cut in the programmes of the Services and Supply Departments was inevitable but the question of where those cuts should fall represented a major issue of policy which could only be decided by the War Cabinet.

The R.A.F. Manpower Demand and Allocation for the Period July 1942 to December 1943.

The Air Force demand for 365,000 men and 107,000 women during the eighteen months period from July 1942 to December 1943 was based on a new expansion programme, C.A.E./E/40, which was due to be completed by the end of December 1944.(2) The manpower demand represented the numbers needed to meet establishment deficiencies, to achieve the approved expansion programme and to meet wastage. Included in it was a demand for 20,000 men for the primary purpose of meeting overseas

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(1) The total demand was made up as follows:-

	Men	Women	Total
Navy	274,000	36,000	310,000
Army	649,000	160,000	809,000
R.A.F.	365,000	107,000	472,000
Total	1,288,000	303,000	1,591,000

(2) The following intakes were required:-

	Men	Women	Total
July to December 1942	120,000	54,400	174,400
January to June 1943	157,000	33,500	190,500
July to December 1943	88,000	19,000	107,000
Total	365,000	106,900	471,900

commitments which were certain to arise but which could not yet be specified. If a new theatre of war was opened up, or an existing theatre was reinforced, squadrons had to be increased from home to overseas establishments. Similarly, the frequent introduction of new types of technical equipment and the extension of the scope of existing types necessitated the provision of additional men for their operation and maintenance. The personnel required to meet these contingencies had usually to be found long before new men could be enlisted and trained, so that without this margin of 20,000 the full demands of strategical flexibility and technical development could not be met. The proposed margin represented 2.5 per cent for officers and 3.7 per cent for airmen at home. A proposed margin of 6,000 women represented 3.7 per cent of the airwomen at home.(1) Until about a year previously, it had been the practice to include a margin of about 10 per cent of target establishments in order to guard against unforeseen contingencies, but this margin had then been discontinued and there had been a consequent rise in establishment deficiencies which had now to be rectified. The new margins, that were proposed, were regarded as the absolute minimum possible.

The Prime Minister stated in November 1942(2) that in view of the large gap between the demand and supply of manpower for the period July 1942 to December 1943, the expansion programmes on which the latest manpower demands were based would have to be revised. As he considered it unlikely that the enemy would be able to bring to bear against the United Kingdom as heavy a weight of air attack as two years previously, and as invasion or large scale airborne attack also seemed unlikely, the Prime Minister asked for reductions in the strength of Civil Defence, Air Defence of Great Britain and the R.A.F. Regiment. He said that the demands of the Royal Air Force and of the Ministry of Aircraft Production should be governed by the fact that it was more important for the time being to increase the output of aircraft than the number of officers and other ranks of the Royal Air Force. A cut in the demand of the Royal Air Force for air ground staff could not be avoided, and, by concentrating on essentials, the most effective use would have to be made of whatever manpower was available. The Prime Minister accordingly proposed cuts in the demands of the Services and their Supply Departments to cover the period up to end of 1943.(3) The position would, however, be reviewed at the end of June 1943. The proposed cuts included one of 185,000 men and 40,000 women in the R.A.F. demand and one of 75,000 in that of M.A.P. This latter cut was later increased to 100,000. The Royal Air Force expected to have entered approximately 120,000 men and 54,000 women by the end of 1942,

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(1) Misc: 36(42) 1.
(2) W.P. (42) 556.
(3) The manpower demands and the proposed cuts were as follows:-

	Original Demand	Cut Proposed
Admiralty	509,000	75,000
Army (including Supply)	957,000	595,000
R.A.F.	472,000	225,000
M.A.P.	603,000	75,000
Civil Defence, etc.	148,000	119,000
Total	2,689,000	1,089,000

so that, if the War Cabinet approved the proposed cuts in the demand, they would be left with an allocation of only 60,000 men and 13,000 women for the whole of 1943.

The War Cabinet approved the proposed manpower allocations at their meeting on 11 December 1942,(1) on the understanding that every possible step would be taken to avoid a reduction in the striking power of the Forces. Departments were told to proceed on the assumption that these allocations would have to last until the end of 1943, but it was agreed that the position should be reviewed before the end of June 1943, in the light of strategic developments. For the first time, the requirements of each Service were linked with those of its related Supply Department and their allocations were placed under a common ceiling. The War Cabinet agreed that, in order to ensure balance between related Service and Supply programmes, adjustments should be made as required in their respective manpower allocations.(2)

The Effects of the Prime Minister's Cut

At the War Cabinet meeting on 1 December 1942, the Service ministers were asked to consider how they would meet the proposed cuts in their manpower demands and to submit statements showing what modifications in their programmes would be necessary and what would be the consequences. A week later, the Secretary of State for Air presented a paper indicating the effects of the cut on the R.A.F. and the proposed means of dealing with the situation.(3) Before the Lord President's enquiry had been made, the manpower requirements of the R.A.F. had been subjected to a thorough examination with the object of minimising the demand. As a result the demand had been reduced by about 100,000 men and women, so that the Prime Minister's cut could not fail to involve a grave limitation in the effective strength of the Force. The Secretary of State said that the planned programme of air expansion would have to be reduced by over one hundred squadrons by the end of June 1944. This estimate was arrived at after making all possible adjustments in those branches of the Air Force not directly concerned with the operation of aircraft, such as the Balloon Barrage and the R.A.F. Regiment. A separate aspect of the manpower problem was that one effect

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(1) W.M. (42) 167th Conclusions.

(2) The principle of relating the manpower demands of the Services with those of their associated Supply Departments was a new one and was emphasised first in the Lord President's paper W.P.(42)539:-

> 'Manpower had been framed on the basis that, from 1943 onwards, our munitions industries would have passed their peak production and would be able to contribute increasing numbers of men to the Services to use the great mass of equipment built up by these industries and supplemented from American sources. Since America's entry into the war, we have now to face the necessity of supplying from our own resources a vast proportion of the equipment which we had expected to be able to draw from the United States: and we are thus compelled to retain in our munitions industries the manpower on which we had counted for the continued expansion of our Armed Forces.'

(3) W.P. (42) 570.

of the cut would be to increase the proportion of the Dominion and Allied aircrews in the R.A.F. until, by mid-1944, over half of the flow of trained aircrews into squadrons would be of Dominion and Allied nationalities. The Secretary of State emphasised that the effects of the decision to cut the R.A.F. manpower demand would be critical and enduring. It would not be possible, six months later, to reverse the decision, or at least to give effect to such a reversal, under a period of many months. It was, therefore, essential to take a long term view and to realise that any decisions taken in December 1942, would stamp the pattern of British air power throughout 1943 and 1944.

The adjustments in those branches of the Air Force not directly concerned with the operation of aircraft, to which the Secretary of State had referred, included a proposal to effect a reduction of 40 per cent in the current strength of 50,000 men and women in Balloon Command by eliminating some sites and thinning others. This would result in a saving of roughly 20,000 men and women in 1943. It was also proposed to cut the R.A.F. Regiment by 25 per cent. As the scale of light anti-aircraft defence of aerodromes was already very thin, this cut would have to be made mainly at the expense of the rifle and armoured squadrons which would be reduced by about 60 per cent. The estimated saving under this head was 20,000 men in 1943. Finally, a further review of individual establishments and of administrative policies was being conducted with the co-operation of all Air Officers Commanding-in-Chief. In view of the drastic pruning which had been made before the manpower demand had been presented, the potential field of saving was very limited, but the possibility of further savings amounting to 30,000 men and women in 1943 was assumed.

In January 1943, the Air Member for Personnel stated that the Service could not conceal that it was passing rather abruptly from a policy of expansion to one of contraction, with consequences affecting men and women both outside and inside the Service.(1) Some 40,000 of the allocation of men for 1943 would be required for aircrew training so that only 20,000 men and 12,500 women would be available for ground duties. As a result, various classes of men and women who were hoping to join the R.A.F. for ground duties during 1943 would not be able to do so, as it would be necessary broadly to restrict male entries for ground service during the year to members of the Air Training Corps to which the Air Ministry was under special obligation. Thus it would no longer be possible to enter men over 41 years of age, a course to which special recruiting measures had been directed, or to continue the scheme for the entry of men of Grade 3 medical standard, which had been adopted to release fitter men for more active service. The consequential restriction of entries to younger and more able men would, of course, assist the adoption of more rigid standards of austerity and economy which were necessary to enable the striking force of the R.A.F. to be maintained and extended with the support of relatively fewer numbers of ground personnel. The opportunity for service in the R.A.F. of men who were to be released from reserved occupations, and of women who were to be conscripted, would be lessened, and the policy of substituting women for men would be considerably curtailed.

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(1) A.M.P. 2350.

Target Force 'H'(1)

Owing to these heavy reductions in the manpower allocations to the Air Ministry and to the Ministry of Aircraft Production, and to the formulation of a new aircraft programme in January 1943, the preparation of a new target force became an urgent necessity. The Air Staff accordingly drafted Target Force 'H', which represented an attempt to reconcile strategic requirements as nearly as possible with the numbers of aircraft and personnel likely to be available. It was due to be completed by the end of December 1944. Manpower had now become the primary limiting factor in the expansion of the R.A.F., and the feasibility, from the manpower aspect, of the expansion programme proposed in Target Force 'H' was, therefore, closely examined in April 1943.

Target Force 'H' required a strength of 868,500 trained men and 190,500 trained women by July 1944. This represented a reduction of 104,000 men and 18,000 women, a total of 122,000, on the previous target, whereas the War Cabinet had cut the last manpower demand by 185,000 men and 40,000 women, a total of 225,000 in the previous December. In order to man Target 'H' in the normal manner and to provide for the ensuing period, i.e. down to 1 July 1944, the Director of Manning estimated in March 1943, that the R.A.F. would require during 1943 some 77,000 men and 23,000 women in addition to the authorised allocation.(2) Broadly, this additional manpower was required to make good establishment deficiencies. Without it, there would be the following deficiencies of trained personnel on 1 January 1944:-

Technical and Allied trades	- 31,000	(6.5 per cent)
Other training trades	- 3,000	(1 per cent)
Non-training trades	- 49,000	(19.5 per cent)

On the assumption that the 100,000 men and women would not be forthcoming, it became necessary either to re-plan Target 'H' or, alternatively, to decide how the deficiencies should be borne. Apart from the possibility of an allocation of 15,000 additional women, no further increases could be anticipated in the authorised intakes for the first six months of 1943 as the War Cabinet were not due to reconsider the manpower situation until May or June.

At their meeting on 13 April 1943,(3) the Air Council decided that expansion should proceed in accordance with the programme outlined in Target 'H', notwithstanding the above mentioned personnel deficiencies. The Director of Manning stated in April that during the ensuing three months the Air Force would gain 17,000 maintenance and 15,000 non-maintenance tradesmen compared with a requirement for 33,000 of the former and 38,000 of the latter. They would be derived from four principal sources:-

(a) Ex-training.

(b) Returns of men loaned to the aircraft industry.

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(1) CWE/E/47.
(2) 8663/D.G.O.
(3) A.C. Mtg.7 (43).

(c) Withdrawals of men from Article XV of the C.T.P. units on replacement by Dominion personnel.

(d) Airmen ex-overseas.(1)

Before the demand for an additional 100,000 men and women for 1943 was submitted, a more comprehensive review of additional requirements, which was made in early June, revealed that these now amounted to 126,000 men and 19,000 women, a total of 145,000.(2) The additional 45,000 was made up as follows:-

Increase in aircrew intakes	10,000
Increases in training establishments	10,000
Increase of signals requirements	10,000
Increase of ancillary units	15,000
	45,000

The Air Council discussed the additional manpower requirements at a meeting on 15 June 1943,(3) at which it was generally agreed to submit to the Lord President the full manpower requirements for approved establishments for all units in the planned expansion programme. The need for the additional 126,000 men and 19,000 women by the end of 1943 included 5,000 men and 15,000 women whom the Ministry of Labour had already agreed to allocate to the Royal Air Force over and above the manpower allocation by the War Cabinet. The Ministry of Labour had asked, however, that they should be included in the demand now to be submitted.

The Air Council were able to provide an absolutely firm justification for the figure of 145,000 in detail. Approximately 100,000 represented deficiencies on establishments of which the Air Council had been aware when approving Target Force 'H'. The remaining 45,000 represented additional requirements which could not have been foreseen at that time. The formation of the Tactical Air Force, changes in the structure of Bomber Command, alterations in the wastage rates resulting from the increased intensity of Bomber Command operations and additional requirements for Transport Command were examples of the unforeseen developments which had contributed to this additional demand. Aircrew requirements had increased on account of the intensification of operations and of the need to repatriate on the completion of their first operational tour certain Dominion personnel previously earmarked for service in other Commands.(4)

In a minute to the Prime Minister, forwarding a copy of the additional manpower demand, Captain Balfour, who was acting for the Secretary of State, said:-

'If we do not obtain the numbers that we need, the only way in which we could avoid a reduction in efficiency (and then only temporarily) would be to cannibalise the training organisation. The Air Ministry would be firmly opposed to any such measure since it would not only lead very soon to the cessation of expansion, but

(1) E.R.P. 260.
(2) A.C. Paper 39 (43).
(3) A.C. Paper 39(43).
(4) W.P. (43) 273.

it would be bound to lead to a rapid reduction in the size of the force. I am sure this would not be acceptable to the Chiefs of Staff or to the Government.'

Such was the case made out by the Air Ministry when they presented their demand for an additional 126,000 men and 19,000 women to the Lord President. When he had co-ordinated the demands of all the Services and industry, however, the Lord President reported that, whereas their minimum requirements amounted to 912,000 men and women, the available supply was only about 414,000, roughly a deficit of half a million, so that it was clear that cuts would have to be made in all demands. (1)

Additional Manpower Allocation to the R.A.F.

Early in July 1943, the Prime Minister made his recommendations as to the allocations of manpower that were to be made to the various Service and Supply Departments for the last nine months of 1943.(2) He said that the maximum allocation which could be considered for the R.A.F. for that period was 100,000 men and women. He also recommended that the Ministry of Aircraft Production should receive 212,000 men and women.

The R.A.F. and its supply industry were, therefore, to receive 312,000 men and women out of the available 414,000. His recommendations left the R.A.F. with only 64,000 out of their demand for an additional 145,000 men and women, after allowing for the balance of 36,000 which was outstanding from the previous allocation. There was thus a difference of some 81,000 between the demand and the actual allocation. After meeting a wastage element of 57,000, only 7,000 men and women of the 64,000 would remain to meet establishment deficiencies and provide for expansion. In view of the very drastic cuts which had been made in the manpower demands of the Army and Navy, however, the Air Ministry regarded themselves as fortunate not to have their demand cut even further.

Consequences of the Inadequate Manpower Allocation

The Air Council had foreseen the cut and were ready with a plan to mitigate its consequences. A deficiency of 85,000 ground personnel (approximately 9 per cent) was expected by the end of the year owing to the augmented target establishments and to the necessity for providing further aircrew personnel at the expense of the intake of ground staff. There was no scope for further reductions without serious effects on the operational effort and efficiency of the R.A.F. It was agreed that the deficiency should be borne in the following manner:-

(a) R.A.F. Regiment. A further establishment reduction of between 5,000 and 7,000 spread between Home, Middle East and India Commands.

(b) Balloon Command. A further reduction of two hundred balloons was to be made, yielding a saving of an additional 2,000 personnel.

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(1) W.P. (43) 271.
(2) W.P. (43) 295, 6 July 1943.

(c) Middle East Command. It was hoped to save maintenance personnel as a result of the shortening of lines of communications and the transfer of a part of the maintenance organisation to N.W. Africa. Some further economy in respect of defence and of mobile organisation was considered possible later in 1943. By this means, a saving of 15,000 personnel might be achieved.

(d) Tactical Air Force. By retarding the development of the Tactical Air Force in the United Kingdom, a saving of 8,000 might be achieved, mainly by delaying the build up of ancillary units.

The remainder of the deficiency was to be spread over the ground establishments as a whole in proportions which would be adjusted from time to time in accordance with the general strategic situation. This procedure operated in accordance with a system of priorities which imposed increasing burdens on the lower trade groups and upon the less essential Commands.(1) Thus, up to the middle of 1943, North Africa was given the highest priority. Maintenance deficiencies in the Home Commands were already high and it was only in the direction of the delayed development of the Tactical Air Force that large manpower savings could be made since it did not need to attain its full strength and offensive power, on the basis of current planning, until the spring of 1944.(2)

Although the above mentioned measures were regarded as the best possible means of distributing the anticipated deficiency of 85,000 ground personnel, it was recognised that the impact of the cut would still be severe. The unit situation would be worsened by the turnover of men and women required for the training organisation as, owing to the manpower cut, approximately 60,000 serving airmen and airwomen would have to be diverted to technical training in lieu of new manpower.

Even with the most careful distribution of deficiencies, the following ill effects of the manpower shortage were regarded as inevitable:-

(a) Maintenance standards would suffer.

(b) The flexibility of the Air Forces would be impaired.

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(1) Home Commands were placed in the following order of priority in the allocation of deficiencies in the three groups of trades:-

	Technical & Allied trades	Other Trg. Trades	Non-Trg. Trades	Overall Deficiency
	%	%	%	%
Flying Training Command	3	1	7	4
Technical Training Command	3	1	7	4
Bomber Command	4	1	9	4
Coastal Command	5	1	11	6
Transport Command	7	1	15	8
Northern Ireland	7	1	15	8
Maintenance Command	8	1	18	10
Fighter Command	9	1	20	9

(A.M.File. S.91923)

(2) C.O.S. (43) 446 (O).

(c) The Operational Commands would be seriously hindered in their training and operation.

(d) No margin was available, and efficiency would suffer from constant re-shuffling of personnel.

(e) The capacity of any offensive involving the establishment of mobile field organisations and ancillaries would be seriously curtailed.

(f) The problem of finding enough men suitable for aircrew training from available allocations would become increasingly difficult.(1)

A further Decline in the R.A.F. Manpower Situation

When he recommended a maximum intake of 100,000 men and women for the R.A.F. during the last nine months of 1943, the Prime Minister made a number of proposals for helping to meet the most urgent current manpower commitments of the national war effort. They were all concurred in by the War Cabinet.(2) These proposals concerned the need to maintain and increase the Ministry of Aircraft Production labour force, the provision of men for landing craft and the need for a review of R.A.F. establishments. Each proposal represented a potential deterioration in the R.A.F. manpower position which was made even worse by a decision in the following month, August, by the Ministry of Labour to cut down the number or sources from which the R.A.F. could obtain recruits outside the authorised allocation.

Manpower for the Aircraft Industry

The Prime Minister emphasised the paramount importance of aircraft production and, therefore, of maintaining and increasing the manpower at the disposal of the Ministry of Aircraft Production. He stipulated that if the supply of manpower during the remainder of the year did not reach the anticipated figure, the deficit was not to be borne by M.A.P. who were to receive their quota in full,(3) but was to be distributed pro rata among all the other claimants. The Services would not, therefore, be permitted to take their full allocations early in the period. Moreover, men who were employed by M.A.P. were not to be called up for the time being, and the M.A.P. were relieved of their obligation to return to the R.A.F. the mechanics who had been loaned to the aircraft industry in 1941 and 1942.

Special efforts were to be made to expand the labour force of M.A.P. to 115,000 by the end of 1943 by the above measures and by drawing into the aircraft industry women who would otherwise have gone into the Services. To this end it was proposed, and agreed, that:-

(a) The intake into the Women's Services should be reduced to the minimum:-

(i) By stopping volunteering except for some special posts. (So far as the W.A.A.F. was

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(1) W.M.(43) 100th Conclusions.
(2) W.M.(43) 102nd Conclusions, 22 July 1943.
(3) W.P. (43) 319, 19 July 1943.

concerned, the special posts included personnel for meteorology, radio officers, personnel selection clerks and officers with special qualifications not available in the Service).

(ii) By not making any further age groups of women subject to conscription under N.S.A. for the time being.

(iii) By appealing to women already accepted for the Services to go into the aircraft factories until they were required for the Services.

(b) Women up to the age of 50 inclusive should be registered for employment.

The Provision of Personnel for the Manning of Landing Craft

When the Prime Minister made his final proposals on the allocations of manpower for 1943, he proposed that, as the additional men required by the Navy for manning landing craft for 'Overlord' could not be provided by drawing any more men away from the munitions industries or from other civilian activities, the Chiefs of Staff should consider whether, if the additional men were really required, they could be obtained at the expense of the Army and Air Force quotas.(1)

The Chiefs of Staff agreed that the R.A.F.'s contribution to the landing craft commitment should be 2,600 men. The Chief of the Air Staff told the Chief of the Imperial General Staff in October that the R.A.F. could do so if they were allowed to recruit this number in Ireland over and above the allocation. This was approved, and it was agreed by Air Ministry and Admiralty representatives that the simplest way of giving effect to this decision would be to ask the Ministry of Labour to reduce the R.A.F. ceiling allocation by 2,600 men to increase that of the Navy by the same amount. The balance of the R.A.F. allocation still to be recruited remained the same, as it was agreed that of the Irish already recruited, 2,600 would not be regarded as borne against the R.A.F. allocation.

An Enquiry into R.A.F. Establishments

The Prime Minister suggested to the War Cabinet in July 1943, that there should be an enquiry into the establishments of R.A.F. squadrons with a view to effecting further reductions in the proportion of ground staff to aircrews. In particular, he expressed dissatisfaction with the fact that if the total number of men in the R.A.F. (1,150,000 in July 1943) was divided by the total number of first line aircraft (say 6,000), the result was a figure of about 200 men per machine.

It was quite unavailing for the Chief of the Air Staff to point out that this figure gave an entirely misleading impression as it took into account the whole of the training, equipment, maintenance and ancillary organisations for, at the War Cabinet meeting on 22 July the Prime Minister announced that an enquiry would be held in order to discover the

(1) W.P. (43) 319.

proportion which the ground personnel of the R.A.F. bore to:-

(a) first line strength, and

(b) sorties against the enemy.

The enquiry was to be made by the Deputy Prime Minister, the Minister of Production and the Paymaster General.

The strong views held by the Prime Minister on the manpower overheads of the R.A.F. were not modified by detailed explanations. For example, when the C.A.S. pointed out why it was necessary to provide more pilots than aircraft in squadrons, the Prime Minister replied:-(1)

> 'All these issues will have to be considered by the Cabinet Committee. I certainly do not accept the establishments mentioned ..... except as desiderata where manpower was unlimited.
> Unfortunately we do not live in a world where we can have everything we wish for, and the R.A.F. cannot be the sole exception to this natural and universal law.'

The Committee were rather overwhelmed by the complexity and scope of the subject they were asked to examine, but their report, which was issued in January 1944, was generally favourable to the R.A.F. and did nothing substantially to confirm the Prime Minister's impression of the Air Force's prodigality in manpower. They criticised the use of tour-expired aircrews on instructional duties and the high proportion of personnel who were under training. They found that over 25 per cent of the strength of the R.A.F. in the United Kingdom was made up of personnel employed on duties connected with the servicing and repair of aircraft and equipment and were impressed by the strikingly high cost in manpower of training and maintaining an extremely specialised operational force.(2)

A Reduction in R.A.F. 'Free' Recruiting

When the War Cabinet agreed, on 22 July, with the Prime Minister's recommendation that the R.A.F. should be allocated 100,000 men and women for the last nine months of 1943, it became necessary for the Air Ministry to determine the balance outstanding as a considerable portion of the authorised intake was already in the Service. In order to do this it was necessary to arrive at a clear understanding as to which sources of personnel should be counted against the allocation and which should be free from it. Broadly speaking, the R.A.F. had assumed that the figure of 100,000 included only those recruits who were subject to some form of control by the Ministry of Labour and that volunteers from other sources would not be counted, although the additions to strength which resulted would naturally be considered when manpower demands were made for 1944. The Ministry of Labour expressed the view, however, that as the allocations had, for the first time, been made against an overall deficiency of manpower, it was essential to count all recruits enlisted in the British Isles, no matter from what source they had been obtained. The point was of considerable practical importance as it affected the

(1) Minute dated 26 July 1943.
(2) W.P. (44) 58.

extent to which trainees would be available to feed training courses during the current year, and, therefore, the number of trained personnel who would become available during the first six months of 1944.

As the result of further discussion, agreement was reached between the Air Ministry and the Ministry of Labour regarding a considerable number of categories. On the credit side, the Ministry of Labour agreed that men and women locally enlisted abroad should not count against the allocation, nor should men of Grade III or Grade IV medical category, who were not subject to call-up under N.S.A. procedure, but whom the R.A.F. had accepted as volunteers. The Ministry of Labour also agreed that airmen returned to the R.A.F. after a period of release to industry should not count. They also agreed that men transferred to the Army or the Navy in agreement with the Service concerned should be replaced by a corresponding number from the allocation of that Service. This did not, however, apply in the case of transfers effected under the instructions of the Chiefs of Staff Committee for the manning of landing craft. On the debit side, the Ministry of Labour considered that aircraft apprentices formed part of the labour force of the country and should therefore count against any allocation of manpower at the date on which they entered the Service. This was in spite of the fact that at the time of their enlistment the boys concerned were well below the age at which men came under the control of the Ministry of Labour. The Ministry of Labour also insisted that all men and women from abroad who were enlisted in the United Kingdom should be counted as should all alien volunteers.

Although the decision to count the above classes of non-United Kingdom personnel against the manpower allocation was a blow to the Air Ministry, they felt far more strongly about the simultaneous decision to count both men and women recruits from Eire and Northern Ireland against the allocation. The Air Ministry had recently embarked on an intensive recruiting campaign in Northern Ireland in order to attract the type of recruit who was unwilling to take up industrial work and who, in the absence of the necessary legal powers, could not be compelled to do so. At the same time, every encouragement was being given to volunteers from Eire. Recruits from these two sources amounted to 3,000 during the period 1 April to 31 July 1943,(1) and it had been estimated that the number

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(1) The following numbers of non-United Kingdom personnel were recruited during the period 1 April to 31 August 1943:-

	MEN			WOMEN	Grand Total
	Crews	Ground	Total		
Eire	65	1,927	1,992	167	2,159
N. Ireland	155	567	722	189	911
Overseas	62	55	117	65	182
Aliens	22	19	41	-	41
Total	304	2,568	2,872	421	3,293

would be increased by a further 6,000 by the end of the year. The aim of the Air Ministry was to obtain from their allocation as many potential trainees as possible, the remainder being accepted for employment as aircrafthands. The Irish recruits were, however, of much poorer quality than those made available under N.S.A. machinery so that, if Irishmen were to count against the allocation, substantial numbers of them, possibly as many as 50 per cent, would have to be rejected. Apart from possible political repercussions which might result from any substantial reduction in the numbers then being recruited from Irish sources, the Manning staff felt that it was extremely undesirable to place any obstacle in the way of accepting this very substantial contribution to the manpower available for the prosecution of the war by individuals who would otherwise neither have joined the R.A.F. nor have volunteered for employment in industry.

CHAPTER 5

REQUIREMENTS AND SUPPLY OF MANPOWER SEPTEMBER 1943 TO AUGUST 1945

The War Cabinet decided in July 1943,(1) that Departments should estimate their manpower requirements for 1944 and should be ready to discuss possible plans early in September 1943. Action to this end was immediately taken in the Air Ministry, a provisional expansion programme was drawn up and manpower requirements were calculated accordingly.(2) This expansion programme was framed in the light of the latest available information on the revised target force. Later developments in regard to the revised target force, which were still not finally decided in September 1943, were not expected to have a material effect on the manpower requirements. Although the new programme showed a decrease of 7½ squadrons, the number of first line aircraft was rather more than in the earlier programme on which the previous manpower demand had been based, and the gross personnel establishments were, in fact, approximately the same.

In estimating their manpower requirements for 1944, the Air Ministry, in common with the other two Service Departments, assumed in the absence of any other hypothesis, that no term could yet be put to the war against Germany. This meant that aircrew, who required a particularly long period of training, had to be provided for in the manpower demand to meet war wastage over the whole of the R.A.F. in 1945 and up to mid-1946.(3) The manpower requirement was accordingly assessed as follows:-

Men	119,000
Women	23,000
Total	142,000

On the recommendation of the Lord President, certain of the civilian demands of the Service Departments were incorporated in the respective Service demands. In the case of the Air Ministry, the civilian demands thus incorporated were limited to industrial staff, the Royal Observer Corps, the Air Ministry Constabulary, etc. The total civilian demand for this purpose amounted to 16,000, thus making a grand total requirement for the R.A.F. of 158,000 men and women during 1944. These numbers were calculated on the basis of the current expansion programme as adjusted to the latest developments in strategic plans.

The demand for ground personnel, which amounted to 98,000, was based on the establishment needed to meet the Expansion Programme which, at the target date of June 1945, amounted to:-

Men	850,400
Women	182,600
Total	1,033,000

The demand for aircrew personnel, which amounted to 44,000, was based on the forecast of training requirements (91,300)

(1) W.M. (43) 102nd Conclusions, 22 July 1943.
(2) A.C. Paper 64 (43).
(3) W.P. (43) 425.

after making an appropriate reduction for contributions from the Dominions under the British Commonwealth Air Training Plan and for the 33,000 serving airmen whom it was hoped to enter into crew training during the year.

The major portion (81 per cent) of the manpower demand was in respect of wastage to the extent of 42,500 for ground personnel and 72,700 for aircrew. Wastage of ground personnel was assessed in terms of a percentage, based on experience and reviewed regularly, applied to the strength of ground personnel. It represented that part of the wastage up to June 1945 for which untrained replacements would have to be entered in 1944. Aircrew wastage was assessed in relation to estimated operational effort in 1945 and 1946. It bore no relation to the anticipated wastage of crews in 1944 for which untrained crews had been entered in 1943 and earlier. It represented, therefore, the estimated wastage in the Force during the latter part of 1945 and during 1946 to meet which men would have to be placed under training in 1944.

The remaining 26,800 (19 per cent) of the manpower demand after wastage had been met, were required to meet deficiencies and to provide for the planned expansion, which was almost wholly in heavy bomber, transport and special duties squadrons. It would have been impossible, in the normal course, to limit requirements, other than provision for wastage, to so low a figure as 26,800. In addition, however, to the reductions which were being made in the R.A.F. Regiment, Balloon Command and Middle East Command and detailed establishment reductions generally, three major factors had made this possible:-

(a) As the peak of the expansion of the R.A.F. would be substantially reached in June 1945, it should be possible in 1944 to contract the ground training organisation to cater for greatly reduced numbers, and to cut training staffs by some 20,000.

(b) The greater facilities which had become available for overseas troops and the comparative stabilisation of overseas requirements made it possible to reduce the non-effective pool in the case of men by 50 per cent thus saving about 23,000

(c) Local recruitment in India and West Africa was expected to yield 26,000 men.

On the basis of existing plans, and in the absence of a firm hypothesis concerning the termination of the war with Germany, there was felt to be little or no scope for further substantial manpower economies. If the additional men and women, who were required in 1944, could not be provided, the result would inevitably be a curtailment, not only of the capacity for expansion of the heavy bomber force and transport squadrons, but also of the ability to maintain the expanded force as a whole.(1)

The Air Council discussed the manpower demand for 1944 at their meeting on 28 September 1943.(2) They approved the assessment of R.A.F. manpower requirements subject to further consideration of the allowances which had been made for

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(1) A.C. Paper 64(43).
(2) A.C. Mtg. 14(43).

Dominion maintenance personnel for the Article XV squadrons who were unlikely to be forthcoming. The assessment of requirements was then circulated on 30 September 1943 to the War Cabinet for their consideration.(1)

The Minister of Labour's National Manpower Survey

The gravity of the national manpower situation in the autumn of 1943 was revealed in a memorandum, dated 22 October, by the Minister of Labour and National Service in which he stated that by the end of the year the mobilisation of the nation would be practically complete.(2) The standards and amenities of the civilian population could not be further reduced, and the number of men and women likely to become available for the Services in 1944 was, under current arrangements, about 300,000 (260,000 men and 40,000 women). To provide a greater number would necessitate the withdrawal of large numbers of skilled and key men from industry and drastic measures would be necessary.

The situation, in fact, presented the manpower planners with a new problem which could not be solved by proportionate cuts in the demands of the Service and Supply Departments, but which required a fresh review of the uses to which the available manpower should be put. As a preliminary to any decision, it was necessary to have in mind some approximate date up to which the maximum provision would have to be made for the Forces. It was also necessary to know the extent to which each of the three Services was likely to be engaged in battle and the extent to which the production of munitions would be sacrificed for the supply of men for the Forces.

The Prime Minister's Summary of the Manpower Position

In a memorandum dated 1 November 1943, the Prime Minister summarised the manpower situation which would arise in 1944 and made suggestions as to the assumptions which could be made in deciding how the available manpower could best be used.(3) He stated that to meet the latest plans and programmes, the Forces and industry needed an intake of 1,190,000 men and women in 1944, and that, apart from any call up for the Forces, there would be a net decrease of 150,000 in industry as a whole.(4) Thus, on current plans, the country

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(1) W.P. (43) 425.
(2) W.P. (43) 472.
(3) W.P. (43) 490.
(4) The demand for 1,190,000 men and women was made up as follows:-

Forces -		
Navy	288,500	
Army	345,850	
R.A.F.	142,000	776,350
Munitions -		
Admiralty	71,000	
Ministry of Supply	-	
M.A.P.	97,000	
Other requirements	6,000	174,000
Other Industries and Services		240,000
	TOTAL (in round figures)	1,190,000

would be faced with an overall deficit of 1,340,000. If the Ministry of Labour continued, regardless of the effect on industry, to operate the administrative machinery for the call-up, about 260,000 men could be obtained for the Forces i.e. under 40 per cent of their demand. About 190,000 of these would be the new class of 18 year-olds. About half of the women required for the Forces could be obtained but only largely, as in the case of the men, at the expense of the munitions industry.

Thus, the problem was no longer one of closing a gap between supply and requirements. The nation's manpower was now fully mobilised for the war effort. The total could not be increased; on the contrary, it was already dwindling. All that could be done was to make within that total such changes as the strategy of the war demanded.

The Prime Minister stated that if the war against Germany and Japan had to be carried on for several more years, the scale of the war effort in terms of manpower would have to decrease progressively. This fact had not been taken into consideration by Departments in estimating their requirements, but the stage had now been reached where it had to be taken into account. For the question of how manpower should be used in 1944 depended on what assumptions were made concerning the duration of the war with Germany. The Prime Minister suggested that there were two broad alternatives. It could be assumed:-

(a) That, for the purpose of manpower plans, the maximum effort would have to be made in 1944, and that Germany would be defeated by the end of that year. On this assumption, it would be possible to cut down substantially the requirements for munitions which could not be delivered until after 1944 and for men who could not be trained in time to fight in 1944. The training organisations and ancillary formations could also be cut down. On this basis, the manpower demands for the Forces and munitions could be substantially reduced.

(b) Alternatively, it could be assumed that manpower plans would have to be based on the assumption that the war with Germany would continue well beyond the end of 1944. In that event, the fact would have to be faced that the forces and munitions industries had been built up to levels which could not be maintained over a prolonged period.

Whichever of these alternatives was chosen, if the war with Germany continued after the end of 1944, increasing reliance would have to be placed on United States resources to make up for the declining scale of the United Kingdom effort.

The Prime Minister stated that the Departments' estimates of requirements had not yet been subjected to the usual detailed scrutiny, but he did not think that the broad issues set out above would be materially affected by any process of paring and pruning. He suggested, therefore, that before work was started on a detailed scrutiny of the figures, Ministers should decide whether the manpower policy for 1944 was to be based on either of the two alternative assumptions set out above, or on some different assumption.

The Recommendations of the War Cabinet Manpower Committee

At a conference of Ministers, presided over by the Prime Minister on 5 November 1943, directions were given that the Secretary of the War Cabinet should arrange to convene an Official Committee under the chairmanship of Sir Robert Sinclair, and having representatives of the Ministry of Labour and of the three Service Departments, which should forthwith work out a possible solution of the 1944 manpower problem on the hypothesis that Germany would be defeated in 1944. In presenting the picture under this assumption an indication was to be given of what the situation would be in 1945 if the war with Germany continued during that year. The War Cabinet also agreed that a Ministerial Committee, consisting of the Chancellor of the Exchequer, the Minister of Labour, the Minister of Production and the Paymaster General, should consider the broad principles involved in this investigation, and give such guidance as might be necessary to the Official Committee referred to above.(1)

The Official Committee issued their report on 17 November 1943.(2) They reported that, in order to ensure maximum effort in 1944 without obviously unreasonable risk in the event of the war against Germany continuing into or through 1945, a minimum intake for the Services of 240,000 men and 33,000 women was required. So far as the R.A.F. and W.A.A.F. were concerned, the Committee recommended an intake of 50,000 men and 10,000 women. They estimated that these allocations would result in the estimated strengths of the R.A.F. and W.A.A.F. falling from 1,004,000 and 177,000 at the end of 1943 to 996,000 and 170,000 respectively by the end of 1944.

The Committee considered that these allocations need cause no reduction in planned squadron strength in 1944. Aircrew intakes would have to be reduced from the spring of 1944, but this would not involve a decline from the current programme until the autumn of 1945. Effectiveness against the Japanese would not be reduced. If without any regard to risks, they could have acted on the assumption that the war with Germany would be over by the end of 1944, then, instead of the suggested R.A.F. intake of 50,000 men and 10,000 women, the Committee would have recommended a net release of 22,000 men and 23,000 women in 1944 by means of a drastic reduction of the training organisation. They did not feel able to recommend this because it involved such serious consequences if the basic assumption should be falsified. If the war with Germany continued in 1945, the result of those releases would be a decline of some 25 per cent in combat squadrons by the end of 1945. It would be impossible to restore the position in any reasonable time. In an endeavour to frame their allocations on a reasonable basis, and having regard to points made in discussion at the Conference of Ministers on 5 November, the Committee therefore chose a middle course of allocating 25,000 men in each half year, which had the effect of postponing any appreciable reduction in the existing programme until the autumn of 1945. The Air Ministry represented that in this way, for a relatively small premium

(1) War Cabinet Gen. 26/1st Mtg.
(2) M.P. (43) 3.

of manpower in 1944, a very substantial insurance against unfavourable developments in the war with Germany would be obtained.

At a meeting of the Ministerial Committee held on 22 November, it was decided that the Admiralty and the Air Ministry should be invited to work out a plan whereby up to 17,000 men could be trained in 1944 in such a way that they could be used in 1945 either in the R.A.F. or in the Fleet Air Arm.(1) The purpose of this was to insure the Navy against the risk that Germany would be defeated in 1944 and that large carrier borne forces would have to be sent against Japan as early as possible in 1945, at the same time as providing a measure of insurance for the R.A.F. against the risk of Germany not being defeated in 1944.

Target Force 'J' and a Reduced Manpower Requirement

While the national manpower situation was being investigated and proposals were being made as to the allocations which could be made to the Services in 1944, the R.A.F. demand was reduced from the original figure of 142,000 men and women. Target Force 'J' was drawn up in September, and by revising the rates of aircrew wastage and eliminating some of the tolerances in the training organisation, it was possible to reduce the demand to 107,500 men and women. These personnel would be required almost entirely to meet wastage, but the necessary resources to provide for expansion could be found from outputs from the training organisation resulting from previous manpower allocations, and from personnel released by the reduction in the training organisation to the benefit of operational requirements.

This demand for 107,000 men and women was based on the assumption that the war with Germany would continue indefinitely, but the Ministerial Committee of 5 November had instructed that manpower demands should be based on the assumption that Germany would be defeated by the end of 1944. If, however, the Air Staff planned on that assumption and if that assumption were proved to be false, there would be a catastrophic decline in 1945 in the number of R.A.F. combat squadrons and the training organisation would have been cannibalised to a drastic extent.

It was considered wise, therefore, to frame an alternative plan for consideration which, on the one hand, would result in a manpower requirement for 1944 within the bounds of what it might be possible for the Committee to recommend and, on the other hand, would avoid the disastrous results outlined above. The Air Member for Supply and Organisation's Department accordingly estimated the effect on the manpower requirement of the assumption that Germany would be defeated in October 1945.

The Air Council discussed A.M.S.O.'s estimates at their meeting on 7 December 1943(2) and decided to proceed with the expansion programme as planned until the autumn of 1945 (bringing all units up to establishment in 1944), at the same

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(1) M.P. (43) 6th Mtg.
(2) A.C. Mtg. 17 (43).

time progressively reducing the training organisation so that by that date the numbers of aircrews completing their training would be no more than required for the Japanese war.

The Allocation of Manpower for 1944 as between the Navy and the Royal Air Force

The War Cabinet agreed on 1 December 1943,(1) with the proposal made by the Ministerial Committee that the 'Admiralty and the Air Ministry should arrange that out of the proposed allocation for the R.A.F., up to 17,000 men should be trained in 1944 in such a way that they could be used in 1945 either in the Royal Air Force or in the Fleet Air Arm.'

The First Lord of the Admiralty suggested(2) that the men required should be diverted to the Navy to receive Naval air training and that, if Germany were not defeated in 1944, they should then be lent to the R.A.F. for the duration of the war in Europe. He based this proposal on the assumption that it would be simpler and quicker for the R.A.F. to absorb a comparatively small number of trained Fleet Air Arm personnel into existing squadrons than for the reverse process to take place.

The Air Ministry did not believe that this would be the case.(3) The continuing expansion of the R.A.F. was at that time confined wholly to heavy bomber squadrons, and the proposed allocation of 50,000 men would be required almost entirely to make good wastage of heavy bomber crews. Thus, if the war with Germany continued beyond 1944, the impact of Bomber Command upon the enemy would be diminished, at what would certainly be a critical period, unless wastage could be made good by the supply of aircrews fully trained to the high and extremely specialised standards of Bomber Command. If the responsibility for providing for R.A.F. needs in this event lay with the Navy, they would have to supply at the end of 1944 and during 1945 17,000 men, all of whom would have to be aircrew and most of them already trained to the standard of Bomber Command. It was not known whether the Fleet Air Arm could produce this number of aircrew at short notice, but in any case they could not provide the specialised categories required. There were seven members of a heavy bomber crew. The training of a heavy bomber pilot differed widely from that of a Fleet Air Arm pilot; there were no air bombers or flight engineers in the Fleet Air Arm, nor were there any air gunners trained in the use of power-operated turrets.

It would, therefore, in the opinion of the Air Ministry, be quite impossible for R.A.F. requirements in 1945, if the war with Germany was still continuing, to be made good from the resources of the Fleet Air Arm. On the other hand, in relation to the numbers of suitable men which could be provided from the R.A.F., the Fleet Air Arm requirements were very small. Moreover, it was understood that a substantial proportion of this number would be unskilled men, and, of the remainder, the proportion of aircrew would be lower than that of skilled or semi-skilled maintenance personnel.

In view of these differences between the Admiralty and Air Ministry, a conference was held on 13 January 1944, between

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(1) W.M. (43) 164th Conclusions.
(2) W.P. (43) 534.
(3) W.P. (43) 546.

representatives of the two Departments concerned in order to decide whether the marginal number of 17,000 men should be enlisted into the R.A.F. or the Fleet Air Arm. The Admiralty representative explained that since the Cabinet meeting, Naval requirements had been modified in two ways. No aircrew were required to be included in the total of 17,000, which now represented a requirement of skilled and semi-skilled ratings. Owing to reductions in Naval requirements, only 3,000 of these men would now be required towards the end of 1944, irrespective of the defeat of Germany, in order to enable Naval plans for the spring of 1945 to be fulfilled. The remaining 14,000 could be provided within six months of the defeat of Germany.

In the course of the discussions which followed the Air Ministry representatives suggested earmarking 3,000 men to be made available to the Admiralty as soon as the German war ended. With the small exception of the need for a conversion course, the men would thus be available for Naval purposes as soon as if they had been entered for training into the Navy.

The Admiralty representatives said that, in the light of the arguments put forward and of the solution presented by their offer to consider later in the year whether the war situation justified an advance instalment of the 3,000 men before the conclusion of an armistice, they felt they had no alternative but to accept this proposal. It was accordingly agreed that the 17,000 men should be entered into the R.A.F. for training, that arrangements would be made to make available 14,000 maintenance ratings within six months following the end of the war with Germany, and that the 3,000 maintenance ratings required by the Admiralty towards the end of 1944 would be made available by the Air Ministry immediately on the conclusion of an armistice with Germany.

Manpower for the Second Half of 1944

When the Ministerial Manpower Committee put forward, in November 1943, their proposals for the allocation of manpower during 1944 (under which the R.A.F. was to receive 25,000 men in the first half of the year and 25,000 in the second half, in addition to 10,000 women in the first half and a possible further 10,000 in the second half), they agreed that the allocation for the second half of the year should be reviewed in May 1944.

A review of the position which was accordingly carried out by the Ministry of Labour and National Service showed that the manpower programmes for 1944 were not developing altogether along the lines anticipated when the allocations were made. The chief new factors in the situation were that the Ministry of Supply and the less essential industries were not being reduced to the extent anticipated, and the decline in the total labour force resulting from the excess of normal wastage over normal intake would prove to be greater than had been expected. Taken together, these factors involved a substantial unbalance of the manpower budget, so that, even if the provisional allocations to the Armed Forces for the second six months were to stand, there would be a substantial gap in

the manpower budget. These provisional allocations,[1] however, were regarded by the Service Ministers as inadequate to meet their requirements. The allocations provided no women for the Auxiliary Services which would run down to the extent that normal wastage was not replaced, and although the allocations would just about meet the requirements of the Royal Navy and the Royal Air Force, the proposed allocation to the Army would be insufficient to prevent a serious decline in strength by the end of 1944.

The Ministerial Manpower Committee Reconvened

On 15 June 1944, the Prime Minister asked that the Ministerial Committee on Manpower should be reconvened to consider the new situation which had arisen and to prepare, for consideration by the War Cabinet, a scheme for the distribution of the available manpower on the following bases:-

(a) For the time being, plans should be based on the continuance of the war in Europe throughout the first half of 1945. By the end of August it might be possible to take a clearer view of the position so that, for the time being, it was advisable to make only short term adjustments.

(b) A temporary increase should be made in the Army intake of men during July and August (say 15,000 instead of 4,000 per month). This increase should be made at the expense of the other Services and should not be provided by the call up of skilled, young men from munitions or other essential industries.

(c) The Ministry of Supply was to effect the approved reduction in its strength, and the remaining labour shortage was to be shared between the Admiralty, M.A.P. and Civil Defence.

The Recommendations of the Ministerial Manpower Committee

The Ministerial Committee reviewed the position during the last week in June and the beginning of July and, after hearing the views of the Service, Supply and other Ministers, agreed to submit to the War Cabinet certain recommendations for dealing with the situation. While recommending firm intakes for the Services for July and August only, the Committee considered it advisable to recommend a provisional intake for the three Services together for the following four months as the Supply Departments needed to look further ahead than the next two or three months in order to work out their programmes. It was impossible to make provisional manpower allocations to the Supply Departments for the full six months without assuming some level of intake into the Services.

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(1) These provisional allocations were:-

	Men	Women
Navy	30,000	-
Army	25,000	-
R.A.F.	25,000	-
Total	80,000	-

The Committee reported that the maximum number of men who could be made available for call up to the Services in July and August, under existing arrangements, was 38,000. Of these 4,000 would have joined the Navy as volunteers before registration under the National Service Act. A further 4,500 consisting of 2,000 who would have been accepted for flying duties and 2,500 Air Training Corps members who would be needed for ground service, would have to be regarded as earmarked for the R.A.F. The balance of 29,500 could all be recruited for the Army.

The Committee discussed with the Service Ministers the effects of allocations based on these figures. The Secretary of State for Air recalled that the provisional allocation to the R.A.F. of 25,000 men for the second half of 1944 represented a reduction upon his original (already reduced) demand. If only 4,500 men were to be provided during July and August, and if no compensation were to be made later, this would mean a net loss of 4,000 men, bringing the total deficiency up to 10,000. As a consequence, the R.A.F. would have either to reduce the number of front line squadrons or to place an increased strain upon the men then serving in these squadrons. Every effort would be made to avoid the first alternative, but it had to be realised that the adoption of the second alternative would mean the increased use of skilled men to perform unskilled work.

With an allocation of 29,500 men, the Army would certainly be able to save one division, but they would require an additional 20,000 in order to prevent the disappearance of three divisions and two brigades. The Ministerial Committee considered that there were two ways in which this additional twenty thousand men could be provided for the Army: (a) by the call up of men for the Army from the R.A.F. Deferred List and (b) by the transfer of trained men to the Army from the Navy and the R.A.F.

At this time there were about 34,000 men on the Deferred List. The Secretary of State for Air had agreed to a reduction of the number on the list to the extent that by the end of the year it would be reduced to 14,000 men, consisting of about 4,000 who could not be made immediately available to the Air Force and 10,000 to give a three months supply of aircrew candidates for the R.A.F. Taking into account the call up in the second half of the year, the R.A.F. could therefore release 10,000 men who could be called up from civil life for service with the Army. In order to effect these releases, it would be necessary for all the men on the List to undergo more rigorous tests, and this would normally take several months. The Secretary of State promised, however, to do his utmost to expedite this process so as to lead to the release of 6,000 men by the end of August and the remaining 4,000 by the end of October.

The effect of transfers to the Army of trained men from the Navy and the R.A.F. would be to increase the deficiencies which already existed, or were expected to arise, in those two Services. Nevertheless, the Committee recommended that every effort should be made to transfer 5,000 each from the Navy and the Air Force. The R.A.F. would thus have an intake, during July and August, of 4,500 men but would lose 5,000 by transfer. The men transferred were to be Grade I medical category, for it was in men of this category that the main deficiency of the Army lay. So far as was necessary, however,

compensation was to be given to the Navy and the R.A.F. by the transfer, as expeditiously as possible, of men of lower medical category from the Army.

So far as the supply of women was concerned, the Committee recommended that the voluntary recruitment of women between the ages of 17½ and 19 years to the Auxiliary Services should be continued, otherwise a number of girls would not be mobilised at all for the war effort. It was estimated that a maximum of 7,500 could be obtained in July and August, without undue disturbance to the general arrangements for the allocation of manpower. Of this number, the Committee recommended that 1,500 should be allocated to the W.A.A.F.(1)

The proposed manpower allocations to the Services were approved by the War Cabinet at their meeting held on 12 July 1944, on the understanding that they would be reviewed towards the end of August.(2)

The Resumption of Re-engagements, Extensions of Service and Enlistments in the Regular Air Force

The possibility of resuming re-engagements, extension of service and enlistment for regular service, all of which had ceased on the outbreak of war, was discussed several times during the early war years but it was not until June 1944 that the time was considered right for such a step, and then only for airmen mustered in ground trades.(3)

The Air Ministry then announced that warrant officers and N.C.O.s who, on 1 September 1944, would have completed at least seven years' regular, including mobilised, service and who could complete 24 years' service reckonable towards pension before reaching age 55, could apply for re-engagement to complete 24 years' service if they had been serving on 3 September 1939 in

(a) the regular air force on a normal regular engagement or any extension or prolongation thereof, or

(b) the reserve on the reserve portion of their normal regular engagement or any extension or prolongation thereof, including any re-engagement thereof.

All airmen serving on regular engagements (including those who were eligible for, but did not wish to apply for re-engagement, and those who were unable to complete 24 years' service by the age of 55 years) were eligible to apply for extension of service to complete 12 years' regular service on their existing engagement. Those whose engagements were extended, would, subject to conditions of age and medical fitness, be eligible to apply for consideration for re-engagement at the appropriate stage in their service.

All airmen serving on non-regular engagements, including those of the A.A.F., who would not have reached 41 years of age on 1 September 1944, were eligible for consideration for enlistment for a period of seven years' regular service from the date of acceptance; they would be eligible, later, to be

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(1) W.P. (44) 375.
(2) W.M. (44) 90th Conclusions.
(3) A.M. File S.46661.

considered for extensions of service and subsequently, subject to conditions of age and medical fitness, for re-engagement to complete time for pension.(1)

A Reduction in the R.A.F. Manpower Demand

The War Cabinet decided on 12 July 1944(2) that an examination should be undertaken of the assumption as to the strength of the R.A.F. in 1945 to which the current programme should be related. In this connection, the Prime Minister asked for a memorandum showing the effect on the manpower requirements of the R.A.F. of a decision that the R.A.F. should not be expanded beyond the size to be reached, under current plans, by the end of 1944. The Secretary of State answered this question at the end of July. He said that if R.A.F. expansion was to be frozen at the end of 1944, an intake of 9,700 would be required in the last half of 1944, while it would be possible to release some 4,500 men during the first six months of 1945.(3) The decision to stop expansion was expected to result in the non-formation of thirteen heavy bomber squadrons, giving a saving of 9,000 personnel. It would also result in training reductions which would yield a saving of another 11,000, so that there would be a total saving of 20,000 men and women by the end of June 1945.

The Chancellor of the Exchequer stated in August 1944, that, for the purpose of reviewing the provisional allocations for the second half of 1944 and of enabling Departments to plan for the first half of 1945, it was necessary that the Service and Supply Departments should be given a new hypothesis. He suggested that Departments should be asked to prepare and submit to the War Cabinet revised estimates of their requirements for the second half of 1944 on the assumption that the war with Germany, though it might be prolonged beyond the end of 1944, would not continue beyond 30 June 1945.(4)

The Service Ministers duly submitted their requirements for men for the second half of 1944. That for the R.A.F. was for 9,700. After allowing for the actual intakes in July and August, the R.A.F. would require only 2,000 in the remaining four months in order to make up the total of 9,700.(5) The demands of all three Services totalled 108,000 men and 19,500 women whereas the supply of men and women was not expected to exceed 69,000 and 8,400 respectively. Cuts were therefore inevitable in some demands, but the Ministerial Committee recommended that the demand of the R.A.F. for 2,000 men should be met in full. The War Cabinet agreed to this recommendation.

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(1) A.M. File S.96027.
(2) W.M. (44) 90th Conclusions.
(3) W.P. (44) 423 - 31 July 1944.
(4) W.P. (44) 487.
(5) The demands put forward by the Service Ministers for the last four months of the year were as follows:-

	Men	Women
Navy	31,000	3,500
Army	75,000	16,000
R.A.F.	2,000	-
Total	108,000	19,500

In addition to the War Cabinet allocation of 2,000 men for the last four months of 1944, the Air Force were allowed to add to their intake 442 men transferred from the Ministry of Aircraft Production's allocation and 638 volunteer women who had been over-recruited during July and August. This brought the total authorised intake up to 3,080 men and women. Unfortunately, however, when the Manning staff had estimated their requirements for the second half of 1944 at 9,700, they had depended on being able to carry over men who should have been recruited during the first half of the year. On this basis, after allowing for the July and August intakes, 3,978 men and women would have been available for the R.A.F. during the last four months of 1944.(1) The Ministry of Labour and National Service denied, however, that any such carry-over had been sanctioned, pointing out that there had been no mention of a carry-over in any of the documents dealing with the allocations for the half year in question. On the contrary, in the paper setting out the allocations for the half year(2) it was stated explicitly that no carry-over from the previous period could be admitted. Accordingly, the R.A.F. had to accept a total authorised intake for the last four months of 3,080 instead of the anticipated 3,978, thus incurring a loss of 900 which could ill be afforded.

A Change in the Assumed Length of the German War

The War Cabinet decided in September 1944, 'that for the purpose of estimating manpower requirements in the second half of 1944, it should not be assumed that the war with Germany will not continue beyond 31 December 1944.'(3) The Vice Chief of the Air Staff stated that aircraft production would, therefore, be gradually reduced to the level required for the Japanese war as from January 1945. The immediate result of this step was that if the war with Germany continued after December 1944, there was likely to be a slow decline in the strength of operational squadrons from December 1944 to March 1945, and after March there would be a serious falling off in strength.

So far as personnel were concerned, the Vice Chief of the Air Staff stated that the allocations for the second half of 1944 had practically all been absorbed so that so far as the intake for 1944 was concerned, the War Cabinet decision could not have any serious effect. At the same time, if taken literally, the decision could lay the R.A.F. open to demands to release manpower by reducing the training organisation so that output from January 1945 onwards was only sufficient to support a 390 squadron force at Japanese war rates. Should this happen, and be acted on literally, and the German war continue beyond January 1945, the R.A.F. would be faced with a situation in which there would be too few aircrews to match the squadrons which it would still be possible to support during the first three months of 1945. It was essential, therefore, that for the time being manpower released should be regulated so that aircrew output and the supply of personnel generally were sufficient to match the force that could be maintained by aircraft output at 390 squadron force level if the German war continued beyond January 1945.(4)

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(1) G.3695/D.G.M.
(2) W.P. (44) 487.
(3) W.M. (44) 124th Conclusions.
(4) A.C. Paper (44) 48.

The Air Council discussed the Vice Chief of the Air Staff's paper at their meeting on 3 October and decided that aircrew training should be so regulated as to match aircraft availability from production and allocations between 1 January and 30 June 1945, on the basis of the War Cabinet decision, and thereafter to meet the requirements of the 390 squadron force for the Japanese war. By this means, aircrews would be provided to match the aircraft which would be available.(1)

Manpower for the War Against Japan

Manpower planning for the war against Japan had started as early as the spring of 1944, when the Chiefs of Staff had made a provisional estimate of the manpower which, on the basis of their latest plans for the Japanese war, the Services would require one year after the defeat of Germany. These figures were based on the assumption that Germany would be defeated by October 1944, and that the Japanese war would continue for three years thereafter. It was estimated that the three Services combined would require a strength of 3,468,000 personnel, including 860,000 for the R.A.F. The corresponding requirement of the Supply Departments was 3,120,000.

In the opinion of the Minister of Production, this scale of effort was more than could be afforded or, indeed, sustained, in view of civilian requirements, as it would mean that war mobilisation one year after the defeat of Germany would be 75 per cent of the end of 1944 level or as great as in the middle of 1941. He therefore asked the Chiefs of Staff to work out the effects on their military intentions for the Japanese war and on their other concurrent commitments, including the occupation of Germany, if the Service manpower, one year after the defeat of Germany, were limited to 3,000,000.(2) The Minister of Production's note was discussed by the War Cabinet in April, and it was agreed that the Chiefs of Staff should revise their plans on the lines of the Note and that, in this regard, it should be assumed that the Japanese war would last for two years after the defeat of Germany.(3)

A Reduced R.A.F. Requirement for Stage II

The reaction of the Air Staff to these proposals by the Minister of Production was that, although the R.A.F. could offer large reductions, reconstruction requirements were not an adequate reason for reducing R.A.F. strength below what could usefully be deployed against Japan while maintaining the forces necessary to meet responsibilities in Europe and on the lines of communication. It was decided to attempt a recast of requirements on a basis of a mobilisation of between 60 per cent and 65 per cent. This was subject to considerations of the scale of American help which could be counted upon. Royal Air Force requirements were accordingly recalculated and it was found possible to reduce the strength required one year after the defeat of Germany from 860,000 to 816,000, a saving of 44,000. This figure of 816,000 was

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(1) A.C. Mtg. (44) 10.
(2) W.P. (44) 173, 29 March.
(3) W.M. (44) 48th Conclusions, 13 April.

made up, as follows:-

War against Japan - S.W.P.A.	127,250
S.E.A.C.	153,700
Occupation of Germany	65,400
Security in the United Kingdom	63,400
Imperial lines of communication	59,250
Striking Force in U.K. and M.E.	57,200
World wide air transport requirements	121,200
Training Command	168,600
Total	816,000

Of this requirement for a strength of 816,000 personnel, 100,000 would be women.(1)

The revised Service estimates were discussed by the War Cabinet at the end of July 1944. The proposed reductions by the Services(2) were not enough to enable the nation to meet all its commitments during Stage II, and the Prime Minister stated that he would issue a draft directive on which to base forward planning for Stage II in respect of provisional manpower allocations.(3) This directive, which was issued early in August, proposed a cut of 1,100,000 in the total strength of the Services and munitions industry. Of this proposed cut, the R.A.F. was to bear a reduction of 200,000.(4)

A Further Reduction in R.A.F. Requirements for Stage II

In view of the Prime Minister's request that the R.A.F. should reduce by 200,000 the strength required one year after the defeat of Germany, the R.A.F. target force for the war against Japan was accordingly re-examined once again. It was found impossible, however, to reduce the figure to less than 706,860, which was nearly 100 000 more than the figure asked for by the Prime Minister.(5)

The Joint Planning Staff were concerned that the R.A.F. were unable to bear their full share of the imposed reductions as the Army were effecting their full cut and the Navy expected to find a considerable proportion of theirs. To this, the Director General of Organisation replied that the R.A.F. had reached the stage where any further reduction in the manpower would be at the expense of operational units and effort.

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(1) W.P. (44) 380, 7 July.
(2) The re-assessments made by the three Services were:-

	Previous Estimate	New Estimate	Reduction
Navy	838,000	820,000	18,000
Army	1,770,000	1,768,500	1,500
R.A.F.	860,000	816,000	44,000
	3,468,000	3,404,500	63,500

(3) W.M. (44) 96th Conclusions, 26 July.
(4) W.P. (44) 431, 3 August.
(5) L.M./9450/D.G.O.

He said that a force for a war against Japan was inevitably costly for the following reasons:-

(a) An extended line of communications would have to be maintained in the A.C.S.E.A. theatre.

(b) The climatic and other conditions obtaining in the Far East would affect operations and administration in terms of additional manpower.

(c) A transport service from the United Kingdom to the Far East, for which full facilities for maintenance and handling of personnel and freight would have to be provided throughout the long line of communication, would have to be operated.

(d) The dispersed nature of Overseas Commands, other than A.C.S.E.A., would increase the overhead establishment expenditure.

(e) Maintenance Command storage commitments would increase considerably with the disbandment of units after the defeat of Germany.

(f) The movement of squadrons overseas with their third or fourth line maintenance backing would represent an immediate additional cost in Service personnel which would not be found by the consequent reduction in the Civil Repair Organisation at home.

(g) The Force had been assessed on the basis of current war establishments which were on an austerity basis and contained no provision for Educational and Vocational Training. The cost of E.V.T. had been estimated at 18,000 men.

The Director General of Organisation stated that in order to reduce the required manpower strength for the Japanese war to 706,860, it had been necessary to make certain broad assumptions. These were:-

(a) That the radar chain in the U.K. would be reduced to 25 per cent of the current cover of approximately 5,000 personnel.

(b) That 26 Group Signals Communications would be reduced to 12 per cent of the current establishment of 2,500 personnel.

(c) That only 2,100 personnel would be required to man the Balloon organisations in A.C.S.E.A. and that there would be no requirement for balloons in the U.K. and M.A.A.F.

(d) That 12 squadrons (3,000 men) and 30 squadrons (6,000 men) would cover R.A.F. Regiment requirements in M.A.A.F. (including Europe) and A.C.S.E.A. and that there would be no other Regiment commitment.

(e) That the Airfield Construction service would be manned by 5,000 personnel or less than 25 per cent of the current establishment.

(f) That the Air/Sea Rescue Service in the U.K. would be reduced to 10 per cent of the current establishment.(1)

These assumptions proved to be too optimistic, however, and by the end of the year the estimated requirement of 706,860 personnel for one year after the defeat of Germany had risen to 760,760.(2) This additional requirement for 53,900 men was made up as follows:-

R.A.F. Regiment	10,900
Signals and Radar	2,000
Maintenance Command	14,600
Airfield Construction	23,000
Bombing Research Mission	1,000
C.C.D.U.	800
D.G.M.'s Pool	1,600
	53,900

Manpower for 1945

In a memorandum dated 8 December 1944, the Minister of Labour and National Service surveyed the manpower outlook for 1945 on the assumption that the war with Germany would continue until 30 June 1945. He said that during the first half year, normally 130,000 men and women would be provided for the Forces. This number would be made up of 120,000 men from the new age class and from short period deferments, and 10,000 women. The total would be increased to 150,000 if the 20,000 fit men who would be released from munitions work were recruited for the Forces. These 20,000 men could, however, only be supplied at the expense of civilian industry, which would have to forgo expansion. This was an important question of policy which would have to be decided upon before allocations of manpower for the first half of 1945 could be made. If the intake into the Forces were 150,000, the strength of the Forces would fall during the period by about 50,000. Additional intakes for the Forces could only be made as the result of most drastic measures for combing out young men from the munitions industry.

R.A.F. Requirements for the First Half of 1945

Estimates as to the Royal Air Force manpower requirements in the first half of 1945 were drawn up in November 1944, and were forwarded to the War Cabinet in December. The estimates were based on the following assumptions and decisions:-

(a) That the German war would end by 30 June 1945.

(b) That after June 1945, there would be a progressive reduction in the strength of the R.A.F. to the level of the 327 squadrons which were estimated to be required for Stage II of the war. This level was planned to be reached nine months after the end of the German war.

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(1) L.M. 9069/D.G.O.
(2) L.M. 9450/D.G.O.

(c) That there was to be no R.A.F. expansion after December 1944.

(d) That every effort was to be made to maintain the first line strength between December 1944 and June 1945. A marked decline in R.A.F. striking power would be inevitable if the German war continued beyond June 1945.

(e) That of the 17,200 trained mechanics, fit for overseas service, who were to be made available to the Fleet Air Arm at the end of the German war, 11,000 would be transferred by 30 June 1945, at the request of the Admiralty.

The flying training organisation had been progressively reduced during the previous twelve months and was by this time in the concluding stages of contraction to the level required in Stage II. The technical training organisation, which had been drastically cut in order to enable the maximum front line expansion to be reached, would now have to be increased in order to make provision:-

(a) To meet Stage II requirements where these were different in character from Stage I requirements: for example, a higher proportion of radar mechanics would be required in Stage II than in Stage I.

(b) To replace men whose tour of duty overseas had expired.

(c) To allow for the introduction of a leave scheme in overseas theatres, in parallel with the War Office scheme.

(d) To offset the release of men in high priority classes.

(e) To produce a sufficient number of tradesmen who were fit for overseas service. In Stage II, the greater proportion of the force would be overseas.

In short, the R.A.F. had to start to prepare urgently for the needs of Stage II, and the above commitments would have to be met if a rapid and efficient deployment against Japan was to be effected at the end of the German war. The total intake into the training organisation that was required on this account was 50,000 men who had to be fit for overseas service and in a low release priority.

In order to make available the maximum number of young, fit men for more active combatant duties, the R.A.F. had up to this time accepted in the ground trades a high proportion of older men and men of low medical category. After allowing for releases at the end of Stage I, it would, therefore, be impossible to make available from the ground trades a sufficient number of men of the required medical standard and of suitable release priority to meet the training commitment of 50,000 stated above. The Secretary of State said, however, that he was prepared to make the difficult assumption that some 35,000 men could be made available from these trades, together with 9,000 surplus aircrew personnel, and to budget for a deficiency.

The Secretary of State anticipated that surplus aircrew trainees would be given the option of transferring to the Army, Royal Navy or Royal Marines, or of training in a R.A.F. ground

trade with a view to employment overseas. This procedure would apply to some 11,000 aircrew pupils, of whom about 2,000 were expected to exercise their option to join the Army or Navy. A further 5,000 men would be released from the R.A.F. Regiment as a result of the projected disbandment of twenty-six squadrons of the Regiment.

To summarise: For the period under review (the first six months of 1945), the R.A.F. would endeavour to meet its commitments and make the essential preparations for Stage II without any general service intake during the first half of 1945. This would involve a serious risk that they would be unable to find, by internal redistribution, the 50,000 fit men that the Service required, but the Secretary of State for Air said that this risk would be accepted. On this basis, the Royal Air Force could release a total of 7,000 men in the period under review, in addition to the 11,000 trained mechanics who were to be transferred to the Fleet Air Arm. Of this 11,000, however, 5,000 were likely to be of low medical category and the 2,000 surplus aircrew trainees who were expected to volunteer for transfer to the Army would not be available until the second quarter of the year. Against these releases, the R.A.F. would require an intake of 250 youths for training as aircraft apprentices during the first six months of 1945.(1)

Service Manpower Allocations for the First Half of 1945

The Chancellor of the Exchequer summarised in December 1944 the manpower demands put forward by the three Services for the first six months of 1945.(2) The R.A.F. had asked for no general service intake but the Navy had asked for 27,000 men and the Army for 181,500, making a total of 208,500 men. The Chancellor stated that by the end of 1944 each of the Services would have received intakes in excess of their allocation for the year. In putting forward their demands for 1945, the Admiralty and the Air Ministry had taken no account of excess intakes. Accordingly, the requirements of the Navy would have to be reduced to the extent of this surplus whilst the R.A.F. should be able to release men on this account during the first six months of 1945.

The Secretary of State for War had asked for a transfer of 70,000 basically trained men from the other two Services in the first six months of 1945(3) in order to complete the first two divisions required for the Far East after the defeat of Germany and to allow for the scheme for the reduction in the overseas tour to be accelerated in the early months of the year. The Royal Navy had offered to transfer 11,900 men and the Royal Air Force 7,000 (5,000 from the R.A.F. Regiment and 2,000 aircrew). This was not enough, however, and although the Chancellor did not consider that it would be possible to effect in the six months transfers on the scale desired by the War Office, he did consider that the R.A.F. and the Navy should do more. He, therefore, recommended that they should each transfer 20,000 men to the Army, these men to be of high medical category.

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(1) W.P. (44) 728.
(2) W.P. (44) 751.
(3) W.P. (44) 705.

The Air Ministry pointed out that a transfer of these proportions would raise serious difficulties. In making the offer of 7,000, full account had been taken of the planned reduction in strength of the R.A.F. Moreover, owing to the R.A.F.'s policy of employing older and less fit men wherever possible, it would be very difficult to find the number needed for transfer. The proposal was, nevertheless, put to the War Cabinet who agreed that the R.A.F. should transfer to the Army during the first half of 1945, some 20,000 men of high medical category. Because of the effect which these transfers would have on the preparations for Stage II of the war, the Air Ministry asked the Army whether they could, in return for the transfer of the Grade I men, let the R.A.F. have an equal number of lower grade men. The Secretary of State for War said that he would be prepared to consider the suggestion although it would be difficult to comply with it.(1) In addition to this transfer of 20,000 men to the Army the R.A.F. were already committed to transfer 11,000 men to the Fleet Air Arm during the same period so that, in all, they would lose approximately 31,000 men during the first six months of 1945.

The position which would be caused by these bulk transfers to the other Services would be aggravated by the fact that the War Cabinet refused to sanction the carry-over into 1945 of the balance outstanding from the 1944 manpower allocation. The only intake, therefore, which remained to the R.A.F. from United Kingdom resources during the period would be in respect of compensation for releases other than bulk releases to the Army and Navy which had been authorised by the War Cabinet. New manpower would, therefore, only be received to the extent that serving personnel were released to industry and for other work of national importance. Such releases were not expected to amount to even 1,000 during the period. The Ministry of Labour and National Service agreed, however, that the R.A.F. could continue to enter specialists such as meteorologists and Japanese linguists, specially suitable radar trainees and University Short Course men. These intakes were to be offset by a corresponding increase in the number of men transferred to the Army.

An Increased Transfer of R.A.F. Personnel to the Army

The number of men who were to be transferred by the R.A.F. to the Army was increased in March 1945, from 20,000 to 21,000 as the result of a proposal by the Ministerial Committee on Manpower that the R.A.F. should give up an additional 1,000 men to compensate for an excess of strength achieved at the end of December 1944, over the strength assumed when the original intakes for the first half of 1945 had been approved.(2) This proposal meant that the R.A.F. would lose the whole of their gains from releases to industry.

This specific relation by the War Cabinet of manpower demands to achievable strength was an entirely new departure, at any rate so far as the R.A.F. were concerned.(3) Until this time, the R.A.F. had always worked on the basis of allocation i.e. when they were allotted 'X' men they expected to receive that number. On that basis, at the end of

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(1) W.M. (44) 173rd Conclusions, 21 December 1944.
(2) M.P. (45) 4, 8 March 1945.
(3) IM.TS 1060/D.G.M./149.

December 1944, instead of having exceeded their allocation they had, in fact, 'under-drawn' to the extent of 635 which they had assumed, in assessing their demand for 1945, they would be able to carry-over into 1945.

The Director General of Manning pointed out that the R.A.F. strength achieved at any one time did not result wholly from intakes of United Kingdom manpower, but included accretions from non-U.K. manpower, such as West Indians. He said that it was not practicable to include these resources down to very fine limits in the forecast strength owing to various fluctuating factors over which the R.A.F. had no control, particularly on short term estimates. Consequently, they were taken into account and were reflected in subsequent demands. Moreover, it had always been ruled that such recruiting as could be achieved outside the United Kingdom, with the exception of Southern Ireland, did not count against allocation. The War Cabinet decision concerning the transfer of the additional 1,000 men to the Army seemed, therefore, to penalise the R.A.F. to the extent to which they had been successful in augmenting the manpower supply by recruiting from non-United Kingdom sources, particularly as the quality of some of the non-U.K. recruits was inferior to that of those provided under the machinery of the National Service Acts.

Effects of the Changes in Manpower Policy in the Spring of 1945

The Prime Minister instructed the Ministerial Manpower Committee, on 26 February, to re-examine the manpower position in the light of certain principles which he laid down,(1) of which the salient points affecting the R.A.F. were as follows:-

(a) Some diminution of air strength in Europe in the latter half of 1945 could be accepted.

(b) Manpower should not be employed on the manufacture of aircraft or other munitions of war designed for use only in the European theatre which could not be completed until after the end of 1945.

(c) No change in the ultimate overall strength of the Forces to be deployed against Japan, but there could be some delay in their build up and equipment, including reserves.

The Prime Minister's directive was considered at the Air Ministry and on 10 March the Air Member for Supply and Organisation stated that the initial factor to be considered in the approach to the problem set by the Prime Minister's directive was the deficiency in R.A.F. ground personnel.(2) To meet the needs of basic aircrew training for the Japanese war, the training organisation required an intake of roughly 1,200 trainees a month until the end of June, and thereafter intakes of between 1,800 and 1,900 a month. Taking this and other foreseen commitments into account, it was estimated that in six months time, the R.A.F. would be faced with a deficiency of between 75,000 and 90,000 personnel, i.e. of some 10 per cent. Since the deficiency could not be spread

(1) W.P. (45) 117.
(2) A.C. Paper 8 (45).

evenly between all trades, a considerably greater deficiency in certain trades might be involved. These deficiencies had a twofold effect: they jeopardised the efficiency of units, involving risk of breakdown, for example, in clerical, medical and aircraft maintenance work; and they rendered impossible the withdrawal from home units of eligible men for drafting to the Overseas Commands to relieve men who had completed their tour and to replace casualties and wastage. This position was represented to the Vice Chief of the Air Staff who instituted an urgent enquiry to determine where the reductions in establishments, which were essential if operational efficiency was to be maintained, could most effectively be made. The aircrew position would be eased to the extent that the review of establishments resulted in decisions to reduce the number of first line squadrons. Appreciable savings of maintenance personnel in the training organisation would follow from a decision to roll up certain types of squadron.

The Air Council discussed the manpower position on 13 March, and decided that the examination of proposals for a reduction in first line strength should be continued, that an estimate should be prepared of the manpower savings which would accrue from a reduction of the training requirements of Bomber Command and that the possibility should be examined of effecting increased economies in overhead establishments.(1)

Before these examinations could be completed, the Vice Chief of the Air Staff summed up the R.A.F. manpower position as follows:-(2)

> 'In the past it has been possible for us to carry a considerable overall deficiency, but this has been under conditions of expansion in which we had numerous squadrons in process of formation or not fully engaged upon operations. We have thus been able to adjust our deficiencies to operational needs. This capacity no longer exists with our front line fully extended and, broadly speaking, all committed to operations.'

By 9 April the examinations into the possible means of reducing the prospective deficiency of at least 75,000 men had been completed. The question of the re-adjustment of first line strength had been approached from the standpoint that a reduction in operational strength should be accepted only after all other expedients for saving manpower had been explored. Full examination had proceeded on this basis, and account had been taken of the savings in maintenance backing and training which would result over the whole field from given reductions in squadron strength; allowance had also been made for economies in overheads which were expected to be achieved. As a result, the Chief of the Air Staff had recommended, and the Secretary of State had accepted, cuts amounting to 37 squadrons by 1 June 1945, which would give about 40,000 men towards the deficiency of 67,000 which faced the R.A.F. at that date.(3) This prospective saving of 40,000 included savings from the reduction of the training organisation, as well as in maintenance, behind the 37 squadrons. It was thought that the remaining deficiency of 27,000 could be accepted.(4)

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(1) A.C. Mtg. 3 (45).
(2) T.S.1194/D.G.M.
(3) A.C. Paper 13 (45).
(4) A.C. Mtg. 4 (45).

The Final Assumption concerning the End of the German War

While these investigations were being made into possible manpower savings, the Prime Minister made a new assumption as to the date of the end of the European war. On 29 March, he sent the following minute to the Ministerial Manpower Committee:

> 'Our progress on the Continent seems to justify a revision of the Argonaut dates for the end of the European war. I have referred this to the Chiefs of Staff who have asked for time to consider the question. No doubt we shall know more in a fortnight. But we cannot delay the necessary studies for a single day. Your Manpower Committee should therefore plan now on the assumption that the European war will end not later than May 31st., bearing in mind that if we should suffer an unexpected reverse in Germany, we might be forced to revert to the Argonaut dates, and, conversely, that an earlier collapse is also a possibility'.

At a War Cabinet meeting on 12 April, the Chancellor of the Exchequer pointed out that it would be of great assistance to the Manpower Committee, in considering allocations for the second half of 1945, if the date 31 May could be given without reservations.(1) The Prime Minister accordingly recommended to the War Cabinet that plans should be made in the assumption that organised resistance in Germany would end by 31 May. In his directive confirming this decision(2) the Prime Minister called upon the Services to ensure that much greater progress was made in reducing the Services to the ultimate Stage II levels than had previously been suggested.

In view of this latest directive, the Manpower Committee invited Service Ministers to formulate proposals on which revised allocations of manpower could be made.(3) The Service Ministers replied that the new assumption concerning the end of the German war would, in practice, make no difference to the intakes into the Armed Forces during the first half of 1945 as the requirements of redistribution and retraining for Stage II of the war would not permit of any effective gain of manpower to industry before 30 June 1945. The new assumption would, however, result in an earlier and greater release of manpower from the Forces in the second half of 1945 and in subsequent periods.(4)

The Ministry of Labour and National Service agreed on 13 April 1945, that Class 'A' releases from the Services should begin six weeks after the collapse of Germany and that Class 'B' releases should begin one month after Class 'A' releases.(5)

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(1) W.M. (45) 42.
(2) W.P. (45) 250, 14 April 1945.
(3) W.P. (45) 207.
(4) W.P. (45) 232.
(5) Class 'A' was the normal release by age and length of war service.
Class 'B' was the special release of a limited number of men and women, out of their age and war service order, who were required for urgent work of reconstruction.

The Manpower Review of May 1945

In response to the Prime Minister's request to the Chiefs of Staff to present statements showing the size of the forces which they intended to deploy against Japan, the Secretary of State for Air produced in May 1945, a review of R.A.F. manpower requirements for the last six months of 1945, on the assumption that German resistance would end by the end of May, in order to meet all planned commitments for the Japanese war.(1) The two primary factors in the review were the resources of manpower already available to the R.A.F. and the ultimate manpower strength required for the Stage II war. These were as follows:-

Strength at 31 May 1945	1,116,000
Strength required at 31 May 1946	757,000

The Secretary of State for Air said that the transfers of personnel to the Army and Fleet Air Arm had proceeded slowly; 15,000 men remained to be transferred to the Navy and 10,000 to the Army. After allowing for wastage and a small number of men to be released after 31 May 1946, he estimated that 266,000 personnel would be available for return to civil life during the next twelve months if no new intakes were contemplated.

During Stage II, three essential processes would have to be carried through simultaneously. These were redeployment, the relief of overseas tour-expired men and release to civil life. Although this would not necessitate an entry of crews during the last six months of 1945, beyond a small entry of 250 University candidates, it would be quite impossible to achieve these three processes without an entry of new manpower for ground duties. The reasons were as follows:-

1. Re-deployment

(a) Home/Overseas ratio. In Stage II the overall home/overseas ratio would be 1.5 : 1.(2) It was therefore necessary to find a larger number of men fit for overseas drafting. In Stage I not only was the greater proportion of the Force at home but, in addition, a proportion of the men overseas could be accepted in the lower medical category for Western Europe only; in Stage II a greater proportion would have to be fit for service in the Far East. This change of ratio accentuated the problem in the redeployment of the Force. It meant that not only was the R.A.F. to be adjusted to a different composition so far as its airmen trades and officer branches were concerned; but it was to carry out this adjustment in entirely different theatres of war, and would no longer have the advantage of being able to use to the same extent such expedients as a force serving at home could employ to overcome manpower difficulties, foreseen and unexpected.

(1) W.P. (45) 321.
(2) See Appendix 4 for details of the distribution of R.A.F. and W.A.A.F. strength between Home and Overseas Commands.

(b) By reason of the limitations in the countries to which women could be drafted, there was a greatly reduced field available at home, consequent upon W.A.A.F. substitution, from which personnel could be obtained for service overseas in Stage II. In addition there was an alteration in the rate of W.A.A.F. substitution in Stage II as exemplified by the following trades:-

	Stage I Per Cent	Stage II Per Cent
M.T. Mechanic	11.2	7.7
Wireless Operator	25.2	13.1
Cook	61.3	39.3
Clerk Accounts	66.4	44.7

(c) Eligibility for overseas drafting. Eligibility for overseas drafting thus became a cardinal feature in the achievement of redeployment.
During Stage I, in order to leave the maximum number of fit men for combatant duty in the Army and Navy, the R.A.F. had absorbed large numbers of older men, and men in low medical categories, for employment in sedentary and non-active trades. The deterioration of men's medical categories in the course of war service and the acceptance of the above policy in the early stages of the war made it imperative to face all the serious consequences which would follow in Stage II. These consequences were to be found in the high rate of ineligibility for overseas drafting, particularly in the domestic and administrative trades. These were the trades which had been staffed by medically unfit men who could not be sent to the Far East, by older men who were due for early release and also by women. Without an intake of new manpower, there was no possibility whatever of meeting the requirements of A.C.S.E.A. for domestic and administrative personnel.

2. Relief of overseas tour-expired men

The Army tour overseas had been reduced to 3 years 8 months, as against 4 years for single men and 3 years for married men in the R.A.F. The Army wished to reduce their tour to 3 years. It was impossible in May 1945 to reduce that of the R.A.F. since the training organisation could not do more than provide for the current rate of tour expiry and completion of establishment. It was, in fact, difficult to relieve tour-expired personnel because of the low rate of eligibility for overseas service, and there would be failure in the rate of relief if new manpower was not received.

3. Releases

Releases under Class 'A', by age and service groups, would start on 18 June 1945. The R.A.F. were committed by Government policy to proceed with these releases, and they had, therefore, to be taken into account as a further complicating factor in redeployment.

For these various reasons, it was estimated that during the last six months of 1945 it would be necessary to move approximately 96,500 personnel from their current musterings

or employments. Some 72,000 of them would have to be given courses of technical training. Of this 96,500, it was expected that 22,000 would be found from personnel redundant in their current trades and not in early release priorities, 22,500 from redundant aircrews, 11,000 from personnel who failed to qualify during training and were thus available for disposal to the best advantage. The balance of 41,000 would have to be found from new manpower. In addition, an entry of 1,500 boys for apprentice training would be required in order to prepare for post-war needs.

The effect of the entry of the 41,000 asked for would be to increase to 306,000 the numbers available for release by 31 May 1946. This figure excluded Class 'B' releases. If these were allowed for at the rate of 10 per cent of Class 'A' releases, there would be approximately 30,000 Class 'B' releases by the end of May 1946, for whom the R.A.F. would require a compensatory intake of new manpower. The total intake of new manpower that was required was therefore:-

For redeployment and Class 'A' releases	41,000
For Class 'B' releases	30,000
For apprentice training	1,500
Total	72,500

The Secretary of State for Air asked for the transfers to the Army to be discontinued. If this could be done with the 10,000 men who had not yet been transferred, and if allowance were made for 25 per cent of these men to be released in their age and service groups, the new intake required would be reduced to 65,000. The total number of releases would then be, by 31 May 1946, 308,500; or, including Class 'B' releases, 338,500.

The Prime Minister's Standstill Order

Shortly before the demand for an entry of 65,000 personnel was submitted, the Prime Minister made enquiries as to the possibility of applying a standstill order to the reduction programme in certain forces and R.A.F. Commands. The Chiefs of Staff accordingly submitted a minute(1) to the Prime Minister pointing out that unless orders were issued within the next day or two, the planned decrease in R.A.F. strength would begin to take effect. They stated further that there could in no case be any question of restoring the R.A.F. to its recent effective strength owing to reductions already made in the R.A.F. training organisation and in aircraft production. The most that could be done would be to arrest the rate of decline by postponing releases and transfers of manpower. In reply, the Prime Minister ruled that all reductions in the R.A.F., except Coastal Command, should be stopped and that no weakening of the Air Force in Italy, or demobilisation, must take place for the time being.(2)

The implications of these rulings were considered at a meeting under the Chief of the Air Staff. It was considered essential for reasons of morale that releases from the R.A.F. must be phased concurrently with releases from the other Services, and that as far as possible the Prime Minister's

(1) C.O.S. (45) 127th Mtg., Conclusion 7.
(2) P.M.'s Minute M.490/5, 17 May 1945.

instructions should be carried out by accepting manning deficiences rather than by interfering with the planned rate of release of personnel.

It was clear that it would be impossible simultaneously to proceed with redeployment, maintain the planned rate of releases and maintain in existence the squadrons due to be rolled up, without feeling some ill effect. To a certain extent, however, the effect of the 'standstill' was eased by the interval which had been allowed for between contraction of first line strength and release of personnel.(1) If it was continued only until mid-July, the standstill order would not have a serious overall effect, but if it were continued beyond 1 August, a dangerous situation would arise owing to shortages in particular trades. The Chiefs of Staff made it clear that the order could not long be applied without putting all units concerned in a false position of apparent strength covering fundamental weaknesses. They, therefore, suggested certain small and inconspicuous adjustments in the shape of the disbandment and transfer of certain units in order that the power of the R.A.F. could be re-established in relation to manpower and aircraft production. On 10 July 1945, the Prime Minister agreed that the standstill order should be revoked immediately.(2)

Changes in the Manpower Demand and in the Rate of Releases

Under the original manpower plan for the second half of 1945,(3) the R.A.F. proposed to release 139,000 men and 12,250 women by 31 December 1945, provided an allocation of 65,000 new manpower was received in the second half of 1945. Of this intake, 30,000 was required to cover Class 'B' releases up to 31 May 1946 and the balance of 35,000 to meet the needs of redeployment. It was subsequently agreed, however,(4) that Class 'B' releases would be less than originally contemplated and that the new intake would cover only those, approximately 12,500, who would be released by 31 December 1945. Thus, while the releases remained as originally planned, the intake was revised to 47,500.

At the Ministerial discussions, the R.A.F. were pressed to release additional women, and a total of 45,000 was proposed with no compensating intake.(5) It was calculated that to release these additional women would result in bearing a deficiency on 31 December 1945, of the order of 26,000. Further examination of establishments disclosed that the deficiency could be removed:-

(a) by reducing the planned build-up of A.C.S.E.A. on 31 December 1945, by eight squadrons, and

(b) by bringing forward the reduction of U.K. aircraft planned for 1946 to 1945.

These measures were estimated to produce a saving of the order of 28,000/30,000 and, on this assumption, the effect of the

(1) A.C. Paper 22 (45).
(2) C.O.S. (45) 172nd Mtg.
(2) W.P. (45) 321.
(4) M.P. (45) 12, 31 May 1945.
(5) M.P. (45) 14.

additional releases of women was broadly acceptable, though the reservation was made that in respect of certain trades, the position would still be difficult.

Pressure was brought to bear, in July 1945, on the R.A.F. to release still greater numbers of personnel in the second half of 1945. The previous and revised proposals were as follows:-

	Men	Women	Total
Previous proposals (M.P. (45) 14)	139,000	45,000	184,000
Revised proposals (C.P. (45) 72)	209,000	68,000	277,000
Difference	+70,000	+23,000	+93,000

The Air Ministry protested that this would result in the Air Force having to bear a burden far heavier than that proposed for either of the other two Services. Approximately 2,040,000 men and women were due for release from the Services by 31 May 1946, and this latest proposal meant that of the men and women to be released from the R.A.F. by that date, some 86 per cent would have to be released by 31 December 1945, as compared with the 70 per cent to be released from the Navy and 44 per cent from the Army by that date.(1) Discussions as to the the rate of release from the Services were still in progress when the war came to an end on 16 August 1945.

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Of all the factors which upset plans and the fulfilment of them during the war, none was greater than the growing shortage of manpower both in the Services and in industry. It had been appreciated before the war that national control would be the only means of ensuring that manpower was distributed among users in proportion to the relative size and importance of the role which each had to play. Hence, the National Service Acts and the Schedule of Reserved Occupations were introduced and became the pivots of the national manpower policy. The R.A.F. placed great value on the principle of voluntary enlistment, however, and large numbers of volunteers were accepted in addition to National Servicemen, especially for aircrew duties.

The manpower problem of the United Kingdom was fundamental and was bound to emerge as soon as other problems were found and resolved. Early in 1941 it began to make itself felt and the R.A.F. suffered their first manpower cut. Increasing

(1) T.S. 1677/D.G.M.

demands by the Services and industry for dwindling supplies led to the introduction, late in 1942, of a system of manpower allocations by the War Cabinet. By the autumn of 1943, the nation's manpower was fully mobilised for the war effort, new manpower henceforth being limited to youths reaching the age of 18 and to a small number of women. As a result, subsequent manpower demands by the Services were drastically cut and the R.A.F. were, moreover, compelled to help meet the growing commitments of the Army and Navy by transferring to those Services many thousands of men who could ill be spared.

In view of this background of a growing national manpower shortage it was only natural that the R.A.F. should have to rationalise their manpower resources to a degree previously undreamed of.(1) Increasing emphasis was placed on the necessity to ensure that every man and woman was fully employed to the best advantage of the war effort, that establishments were reduced to the bare minimum compatible with operational and administrative efficiency, that the supplies from United Kingdom sources were eked out wherever possible by the recruitment of overseas manpower and that no young men of high medical category were employed on duties which could equally well be performed by women, by older men or by men of low medical category.

It is interesting to note the detailed stages through which an R.A.F. manpower estimate or demand had to pass before a final decision was obtained. It was first considered by a working party representative of all members of the Air Council and then usually by the Air Council; it was next considered by a small working party which included representatives of Production and other Departments concerned; it was finally considered by the Cabinet Manpower Committee and then by the Cabinet. During each of these stages, the plans, estimates and proposals were subjected to the most searching criticism.

The Full Utilisation of Skill and Capabilities within the R.A.F.

The acute shortage of manpower which faced the United Kingdom during the later years of the war compelled the R.A.F. to ensure that the skill and capabilities of every single man and woman in the Service were exploited to the full and that none was a round peg in a square hole. To this end, steps were taken to ensure that, on entering the Service, a recruit was placed in the trade to which his skill and character were best suited. As the flow of new manpower into the R.A.F. was quite inadequate to meet the needs of the higher trade groups, large numbers of serving airmen had to be given conversion training and it was found that many thousands of aircrafthands were excellent material for higher training.(2)

The Royal Air Force accepted dilution in sedentary trades by men whose medical category precluded them from call-up. This was done in order to free for more exacting work younger, fit men. This dilution by older, less fit men certainly eased the national shortage of men fit for combatant duties but it had the unfortunate result, so far as the R.A.F.

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(1) See Appendix 23 for the bases of R.A.F. manning planning.
(2) For details of the methods developed to place recruits in a suitable trade and to select serving airmen for higher training see Chapter 8.

was concerned, of making it increasingly difficult in the later years of the war to provide the large numbers of men who were required for overseas drafting and who had to be young and of a high medical category.

The R.A.F. also accepted extensive dilution by members of the Women's Auxiliary Air Force. The necessity for the recruitment of large numbers of women into the Armed Forces in wartime soon became apparent, but many difficulties had to be overcome before women could be employed in large numbers on other than office and domestic duties. On the whole, however, the W.A.A.F. proved to be a highly satisfactory organisation, without which the R.A.F. would have required an additional 150,000 men who could only have been provided at the expense of operational commitments.(1)

The Check on Personnel Establishments

In order to reduce their manpower requirements to the minimum that was consistent with efficiency, the Air Council kept under constant review all policy considerations which affected manpower. In addition to the continuous work of the R.A.F. Establishments Committee, reviews of requirements and establishments were carried out independently at different times by men such as Air Chief Marshal Sir Hugh Dowding and Sir Harold Howitt. By June 1943, there were at least seven committees dealing with one or more aspects of the manpower problem.(2)

Until the end of 1942, the R.A.F. were able to meet each successive cut in the supply of manpower by savings resulting from a review of establishments. The fact that none of these reviews and examinations failed to reveal the possibility of considerable further savings without adversely affecting the level of efficiency appears to indicate the generosity of the establishments in the early war years. Experience also enabled various manning margins to be pared down. By the beginning of the third year of war, however, both margins and establishments had been reduced almost to the minimum and during the remainder of the war, the R.A.F. had to bear a considerable deficiency in certain ground trades.

The 1939-1945 war was the first world conflict in which air power played a major part, and the Air Staff had, therefore, little on which to base their estimates of wastage, unforeseen commitments, etc., and it was only with experience that it was possible to reduce the various margins allowed to meet such requirements. It was found, however, that manpower economy by reducing margins and establishments could only be practised to a certain extent, as provision had always to be made against sudden and unpredictable developments in the war situation. Moreover, a change in establishments could turn, overnight, a surplus in any particular category or trade into a deficiency, or vice versa. The temporary surpluses and deficiencies which arose at different times during the war were, therefore, not necessarily attributable to bad planning but were the inevitable result of such factors as scientific and political developments and variations in the

(1) For further details of W.A.A.F. substitution see Chapter 9.
(2) W.P. (44) 58.

production and wastage rates. These considerations affected the issue to such an extent that a firm and precise long-term programme of expansion and development was quite impracticable.

Assistance from Overseas Manpower

With the virtual exhaustion, by the end of 1943, of the manpower resources of the United Kingdom, manpower assistance from overseas assumed a growing importance. The two main possible sources were the Dominions and Colonies of the British Commonwealth, and both did much to ease the United Kingdom manpower shortage. The Dominions had placed no fewer than 57,000 men at R.A.F. posting disposal by September 1944, in addition to staffing the schools of the Empire Air Training Scheme, and manning their own Air Forces.

The numbers of recruits obtained from the Colonial Empire were comparatively small as few of the indigenous populations were of the standards acceptable for general service. Although the numbers of colonial subjects accepted for general service with the R.A.F. was thus limited the result overwhelmingly justified the big effort which was involved in recruiting, training and transporting these volunteers. The fact of having in the British Forces men from all parts of the Commonwealth and Empire did much to maintain at a high level Colonial morale and material support and sympathy.

More help could have been obtained from the manpower of the Colonial Empire if the possibility of using native personnel in the R.A.F. more extensively and in properly constituted corps to relieve Europeans of semi-skilled and unskilled work in unhealthy climates had been recognised earlier. The West African Air Corps, which proved the feasibility of such a procedure was not formed until early 1944, by which time the greatest need for it had passed. In the employment of native labour, the R.A.F. had much to learn from the Army which had long maintained Colonial Forces.

The drain on United Kingdom manpower could have been eased a little by the more complete staffing of United States Maintainance and Repair Depots in the United Kingdom by American personnel. Until 1943, the shipping position made this impracticable as non-combatant personnel could only have been brought over at the expense of combatant troops. In the later stages of the war, however, men and women could have been trained and brought over for these duties, thus releasing numbers of trained R.A.F and W.A.A.F. personnel for employment with their own Service.

production and training radius. Thus, some considerations affected the choice of a Canadian method was a Plan and proceed to development programme of [illegible] development was quite impracticable.

Assistance from American Manpower

When the Normandy campaign, by the end of 1943, of the manpower resources of the United Kingdom, manpower assistance from overseas assumed a pressing importance. The two main possible sources were the Dominions and Colonies of the British Commonwealth, and both did what they can to save the United Kingdom manpower situation. The Dominions had already no fewer than 77,000 men at R.A.F. training stations by September 1944, in addition to maintaining the schools of the Empire Air Training Scheme, and manning their own air forces.

The numbers of volunteers obtained from the Colonial Empire were comparatively small as few of the indigenous peoples had reached the minimum acceptable for general service. Although the numbers of colonial subjects accepted for general service with the R.A.F. was then limited this month overcoming largely, through the help of a effort which was involved in recruiting, training and transporting these volunteers. The fact of having in the British Forces men from all parts of the commonwealth and Empire did much to maintain a high level of Colonial morale and material support and sympathy.

More help could many men obtained from the manpower of the Colonial Service or the possibility of using Indians permanent in the R.A.F. were exhaustively and in vigorously considered during the relative emergency of manpower shortage. Ultimately it was considered and unfortunately impossibility of the Indian conditions. The Non-Intervention Act Clause, which proved the French building of such a procedure was not formed until early 1944, by which time the greatest need for it had passed. In the employment of native labour, the R.A.F. had been to learn from the Army which has long maintained Colonial forces.

The Dominions and United Kingdom manpower pool have been eased a little by the more complete matching of British Armed Authorities and Repair Agents in the United Kingdom by American personnel. Until V.J.D., the shipping position made this impossible, because of the necessary permanent overseas, only have been provided over the relative of overseas weapons. In the latter stages of the war, however, many American units have been transferred and brought over for these duties, thus releasing numbers of regular R.A.F. and W.A.A.F. personnel for employment with the air war formations.

CHAPTER 6

COMMISSIONING POLICY AND THE SUPPLY OF OFFICERS

At the outbreak of war, the R.A.F. contained three principal branches - General Duties, Equipment and Accountant - which were supported by a number of smaller, professional branches such as Medical, Chaplains, etc. Most branches were backed up by a corresponding branch in one or more sections of the Air Force Reserve and Auxiliary Forces.(1) There was also the newly formed Administrative and Special Duties branch of the R.A.F.V.R. into which it was intended to enter in wartime all officers whose duties did not include actual flying as aircrew.

In peacetime, commissions had been granted to serving airmen as under:-

(a) Aircraft apprentices (via the R.A.F. College) as pilot officers in the General Duties branch.

(b) Ex-apprentice clerks (not below the rank of corporal) as pilot officers in the Equipment Branch.

(c) Airman pilots as pilot officers in the General Duties Branch.

(d) Warrant officers as flying officers for duties as commissioned specialist officers etc., medical quartermasters and, occasionally, as Directors of Music.

The avenues of promotion at (a) and (b) above were closed on the outbreak of war except for apprentices who were under training for a commission or who had been selected for such training, but the Air Council continued to grant commissions under (c) and (d), regulars being commissioned in the R.A.F. and non-regular airmen in the R.A.F.V.R. In both cases, the commission was tenable only for the duration of the emergency.

As the result of an Admiralty decision to grant in wartime a number of permanent commissions to men of the Lower Deck, a meeting under the Air Member for Personnel reviewed, in November 1939, the R.A.F. policy for the grant of permanent commissions in wartime to serving airmen. It was decided, however, not to change the agreed policy of granting no permanent commissions, as the uncertainty concerning the size of the post-war Air Force made it impossible to grant commissions which were truly permanent, i.e. which guaranteed a career. Moreover, to grant permanent commissions to airmen would immediately raise the question of the grant of such commissions to short service officers which had been suspended on the outbreak of war. With regard to 'hostilities only' commissions, the meeting agreed that, so far as aircrew were concerned, there should be no restrictions as regards rank and that commissions should be awarded on merit. Members of the Auxiliary Air Force would be eligible for commissioning in the R.A.F.V.R. and at the end of the war every effort would be made to return them to an A.A.F. squadron.

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(1) See Appendix 5 for details of the strength of each officer branch of the R.A.F. regular, reserve and auxiliary forces on the outbreak of war.

In view of the pre-war policy of selecting a number of aircraft apprentices at the top of the passing out list for flight cadetships, it was agreed that such apprentices should continue to have an outlet to commissioned rank, though not in the General Duties branch since the waste of technical training which this involved could not be tolerated in wartime. It was accordingly decided that aircraft apprentices who passed out exceptionally well should be noted and considered in due course for commissioning in the appropriate branch for the duration of hostilities and that apprentice clerks should be dealt with similarly. It was also agreed(1) that regular airmen who had been commissioned during the war, but who could not be offered a permanent commission on the cessation of hostilities, should then be given the option of returning to the ranks.

The Commissioning of Aircrew in Wartime

The policy which had been agreed before the war for the entry and commissioning of aircrew was put into operation in September 1939. The first wartime flying courses included, however, several types of candidates for whom special arrangements had to be made. These were:-

(a) Pupils entered under the Short Service Commission schems. These were to be commissioned after a short disciplinary course at the Initial Training Wing, after which they were to proceed to a Flying Training School.

(b) Members of a University Air Squadron who were sergeant pilots of the R.A.F.V.R. These were to be commissioned forthwith provided they had obtained the University Air Squadron proficiency certificate before the outbreak of war and were recommended for commissioned rank.

(c) Other sergeant pilots of the R.A.F.V.R. who had entered during the pre-war period. When suitable, these were to be recommended for commissioned rank by Reserve Command. Commissioning would be made operative at the corresponding stage to the normal wartime entry, i.e. on passing out from the Flying Training School.

(d) Cranwell cadets who had still to complete their flying training. These were to be treated in the same way as other officer pupils and were to be commissioned on passing out from training.

(e) University graduates entered with permanent commissions. These commissions were to be effective from the date of commencing training.

The Commissioning of Pilots during the First Months of War

It was decided on the outbreak of war that the proportion of Flying Training School outputs who were to be given commissions should, for the time being, be governed by the ratio of officers to airman pilots in junior pilot posts as reflected in unit establishments. This ratio was provisionally fixed at 50 : 50, but as a 100 per cent quota was to be allowed

(1) A.M. File A.48894/40.

to the Cranwell cadets there would have to be a corresponding reduction in the quotas allowed to the remaining Flying Training Schools. The 50 : 50 officer/airman basis was, however, not operative in overseas squadrons, army co-operation squadrons were not allowed airman pilots and flying boat squadrons and training establishments had a greater proportion of officer pilot posts. Moreover, the proportion of officer posts was weighted by pilots who were employed as squadron adjutants and in junior staff and operations room appointments. Taking these factors into consideration, the proportion of junior posts in current establishments was approximately 63 per cent officers and 37 per cent airmen. In order to fill these posts, a 55 : 45 officer/airman allocation for the outputs of Flying Training Schools other than Cranwell would normally be appropriate, giving a total output from all Flying Training Schools of approximately 60 : 40.

The application of these quotas to future outputs would have been acceptable at the end of 1939 only if the proportions of qualified junior officer pilots and airman pilots had been correct, but they were not. There was a surplus of some 700 to 900 officer pilots over the current establishments, and the correct balance could only be restored by reducing the proportion of commissioned pilots from future outputs. The great majority of immediate future outputs would, however, be pilots already commissioned or entered under peacetime conditions for a commission.

In these circumstances, and because commissions given to airman pilots already in operational units had to be included in the 50 per cent quota sanctioned by the Treasury, it was suggested in December 1939, that for the immediate future the grant of commission to airman pilots completing training at a Flying Training School other than Cranwell should be limited to 33 per cent of the output. The Air Member for Personnel stated that an additional reason for limiting to 33 per cent the proportion of commissions granted to normal pilot outputs was that the quality of the pre-war R.A.F.V.R. entrants, who were filling a large number of the training places at that time, was undoubtedly lower than that of wartime entrants, and it was very doubtful whether 50 per cent of the former were really worthy of commissioning. He therefore supported the proposal to limit commissions to 33 per cent of the normal Flying Training School output for the time being, but stipulated that this figure should be increased to 50 per cent (less any qualified airman pilots who were commissioned) as soon as the war entries began to come forward.(1)

The Introduction of Commissioned Observers

It had been agreed by the Air Council in 1938 that a proportion of observer posts should be filled by commissioned observers, and that a limited number of these posts should be filled by promoting non-commissioned and warrant officer observers. It had been intended to have only a very few commissioned observers, such a policy being dictated mainly by the necessity for providing a suitable career. No such consideration applied after war broke out, since commissions were then granted only for the duration of the emergency, and the

(1) A.M. File S.41477.

primary aim was then to recruit the right type of observer and to ensure that his opportunities of advancement to commissioned rank were equal to those of the pilot. It was essential to avoid a repetition of the situation which existed during the 1914-1918 war when unequal opportunities led to dissatisfaction among observers and, in many cases, led to their applying to be trained as pilots. Having regard to these considerations and to the heavy responsibilities of the observer in wartime, which were no less than, and sometimes exceeded, those of the pilot, the Air Council decided in October 1939, that approximately 50 per cent of observers should be of commissioned rank. Such a step would give the observer complete equality with the pilot. To give effect to this decision, the Air Council proposed to select a number of the observers, then serving, for a commission and to grant a commission to approximately 50 per cent of suitable war entrant observers. A small number of serving officers might also be selected from time to time for employment as observers.

The Treasury objected at first to the proposal that 50 per cent of observers should be of commissioned rank. They based their objection on the fact that the proposal, if put into effect, would increase the overall number of officers to a degree higher than that which they regarded as essential to the efficiency of the Service and would add substantially to costs. The Air Council persisted, however, in their demand for 50 per cent commissioning of observers on the ground that it was essential that they should be given equality of status and opportunity with pilots. On 15 February 1940, the Treasury finally agreed to the Air Council demand. The agreement that was then in force for commissioning only 33 per cent of the pilot output from training was forthwith extended to observers.(1)

Immediate Commissions for Gallantry in the Air

The Air Council considered in June 1940, the possibility of authorising Air Officers Commanding-in-Chief, Operational Commands, to recognise distinguished services rendered by airmen members of aircrews by the immediate grant of a commission to a limited number of airmen who had, in the course of their duties, displayed qualities of leadership. It was proposed that the number of airmen selected for immediate commissioning should be limited to twelve a year for each Command and that those selected should be informed immediately by their A.O.C.-in-C.

Both Fighter and Coastal Commands supported the proposal, but Bomber Command felt that it had certain disadvantages in that, whatever might be said to the contrary, the immediate commission would be regarded as honorific, i.e. as an alternative to the immediate award of the Distinguished Flying Medal. The resemblance to an award was heightened by the fact that a 'ration' for each Command was proposed. Moreover, the introduction of the 'immediate commission' would tend to emphasise unduly the need for gallantry in an officer at the expense of other vital qualities such as leadership, reliability, initiative and powers of command. For these reasons, and because a revised commissioning procedure for airmen had recently been introduced under which special recommendations

(1) A.M. File 773716/38.

could be dealt with exceptionally quickly, the Air Council decided, in July 1940, not to proceed with their proposal to grant immediate commissions for gallantry on aircrew duties.

At the request of Bomber Command, the whole question of the grant of immediate commissions to airmen members of aircrews was reconsidered by the Air Council in October 1942. Bomber Command then stated that cases had arisen when airmen members of aircrews operating against the enemy had displayed high qualities of gallant leadership sufficient to justify the grant of an immediate commission, quite apart from any question of an award solely for gallantry. It was inevitable in a major war that the qualities of born leaders would become apparent and immediate recognition of those qualities would be appreciated by other aircrew members, and would act as a stimulus to greater effort. In the following month, the Air Council authorised Air Officers Commanding-in-Chief, Operational Commands to recognise the distinguished services of airmen members of aircrews by the immediate grant of a commission to a limited number who had, in the course of their duties, displayed qualities of leadership and character as well as distinguished service, which rendered them specially suitable for commissions. Such commissions were to be granted in exceptional cases only and would, therefore, be few in number.(1)

An Increased Proportion of Commissioned Pilots and Observers

The whole question of the proportion of commissions to be granted to pilots and observers was reviewed in October 1940, by which time war entrants had begun to enter squadrons. It was then agreed that, henceforth, the total number of airmen pilots and observers to be commissioned should be based on a maximum of 50 per cent of those coming out of war training, excluding those to whom the Air Force were committed to grant commissions before the war entry arrangements had come into being. The general rule was to be that up to 33 per cent should be commissioned immediately on output from training, while the remaining 17 per cent was to be kept in hand for commissioning from operational units later. Canada, Australia and New Zealand all agreed that this ruling should be applied to their personnel who were placed at the posting disposal of the R.A.F.(2) It was also agreed that officers holding commissions in other branches of the R.A.F. or in the Army who might be transferred to the G.D. branch of the R.A.F., and those granted direct entry commissions for non-operational or other flying duties, including foreigners, should not be included in the calculations, at any rate for the time being. Consequently, when the first batch of volunteers from the Army for aircrew duties arrived in March 1941, the R.A.F.V.R. commissions which they were granted were excluded from the sanctioned quota of 33 per cent on the completion of training.(3)

The Commissioning of Air Gunners

The Treasury had agreed in October 1939, to a proposal by the Air Council that a proportion of the air gunner posts

(1) A.M. File S.59958.
(2) A.M. File S.80787.
(3) A.M. File A.143321/40.

should be filled by officers. The Council felt that such a step was inevitable in order to attract men of the right type, especially for multi-seater bombers and fighters where the personnel needed to be of a particularly high quality.(1) Both direct entrants for air gunner duties and serving airmen then became eligible for commissioning for air gunner duties. Unlike the arrangements for commissioning pilots and observers, whereby the percentage of commissions was related to the outputs from training, the arrangements for commissioning air gunners were based on a percentage of the ultimate establishment of air gunners. This was estimated in May 1940, for example, at 14,985, of whom only 985 would be required to fill officer posts.(2) As the majority of commissions were at first given to direct entrants, the chance of a serving airman being commissioned as an air gunner was even less than the 7½ per cent chance which he appeared, at first sight, to have.

It was decided in August 1940, that as it was now possible to obtain the necessary numbers of officer air gunners by promotion from the ranks, the grant of direct entry commissions should cease forthwith. Nevertheless, by June 1941, only 2 per cent of airman air gunners had been commissioned. This was due to the number of direct entry commissions awarded during the preceding period and to the transfer of officers from other branches to air gunner duties.(3)

With the cessation of direct entry commissioning, no air gunner could be commissioned until he had had operational flying experience. The Canadian authorities felt, however, that an opportunity, however small, should be given to outstanding trainees to obtain a commission on the completion of training, and that it was unjust that air gunners should be the only category of aircrew who were denied the opportunity of being so commissioned. The Air Ministry agreed in February 1941, to accept the Canadian proposal and to allow the commissioning of 2 per cent of air gunner trainees on the completion of training. This decision was ratified by the Dominions concerned who agreed to apply it to all air gunner candidates trained under the Empire Air Training Scheme. The number of commissions that would be available to air gunners after operational experience would depend upon the number of vacancies remaining on the establishment, which would fluctuate according to establishment changes and casualties, but which was unlikely to exceed 2 per cent.

Having secured this concession, the Canadians began to press for an increase in the total number of commissions available for air gunners. There was a strong feeling in Canada that, for political and recruiting reasons, such commissions should be granted on the basis of a percentage of the outputs from training in the same way as they were given to pilots and observers, namely, up to 33 per cent of outputs on the completion of training and the balance of 50 per cent after operational experience. The Canadian attitude was that, if those percentages were not practicable, no less than a total of 25 per cent of each output should be commissioned. The strict limitation on the number of commissions available

(1) A.M. File S.57999.
(2) A.M. File C.5015/40.
(3) A.M. File S.69366.

to air gunners in the past, as compared with the number available for pilots and observers, had, undoubtedly, had the unfortunate effect of inducing the majority of the best aircrew candidates, both in the United Kingdom and in the Dominions, to enter as pilot or observer trainees. Canada, therefore, regarded it as essential that a greater inducement should be offered to high quality aircrew entrants to take up air gunnery. A compromise was reached between the wishes of the United Kingdom and those of Canada in July 1941, when it was agreed that commissions should be granted on the following bases:-

W.T./Air Gunners

(a) 10 per cent of outputs on the completion of training, and

(b) a further 10 per cent after operational experience.

Air Gunners

(a) 5 per cent of outputs on the completion of training, and

(b) a further 15 per cent after operational experience.

It was agreed, at the same time, that the total number of officer air gunner posts available should be assessed on the outputs of W.T./Air Gunners and Air Gunners since the outbreak of war. The procedure would be to take 20 per cent of the total of these outputs to date and to deduct therefrom the number of air gunners commissioned since the outbreak of war, the balance being the number of commissioned posts still to be filled.(1)

The Ottawa Conference and Commissioning Policy

At the Air Training Conference, which was held at Ottawa in May 1942, and was attended by all the members of the Empire Air Training Scheme, the Canadian delegates stated that their Government was not satisfied with the existing policy of commissioning aircrew graduates on a percentage basis and would prefer to have all pilots and observers commissioned on graduation and the percentage of commissions granted to wireless operators (air gunner) increased to 25 per cent on graduation and a further 25 per cent after operational experience.(2) The Canadians felt that many advantages would accrue if all members of the fighting team were afforded equal rank, and that the assurance of a commission on graduation would stimulate aircrew enlistment. The Australian representatives stated that their Government felt that all aircrews considered fit and recommended for a commission should be commissioned. The New Zealand representatives advised that their Government opposed any increase in the existing percentages of commissions granted on graduation and suggested that all commissions should be withheld until graduates had proved themselves in operational duties. The United Kingdom representatives opposed the Canadian proposal on several

(1) A.M. File S.69366.
(2) Minutes of Meeting No. 3 of the Committee on Personnel Problems, held at Ottawa on 20 May 1942.

grounds, expressing the view that a commission was granted in recognition of a man's character and capacity to lead rather than on account of the nature of the duties which he was called upon to perform and of the risks which were involved.(1)

In the course of these discussions on commissioning policy, the United Kingdom delegates explained that the original undertaking to commission certain percentages of graduates had been based mainly on an estimate of the numbers suitable for commissioning which the plan was likely to produce, and that there was no longer any intention of applying these percentages rigidly. The United Kingdom was prepared to agree to the granting of a commission to all aircrew personnel who were suitable and were recommended by the appropriate authorities.

It was finally agreed by all the members of the British Commonwealth Air Training Plan that all pilots, observers, air bombers and navigators(2) considered suitable according to the standard of their own country and recommended for a commission, should be commissioned.(3) The percentage of each category of aircrew who could be commissioned on graduation from training was not altered, but pilots, navigators and air bombers could, henceforth, be recommended and commissioned without limit after operational experience. The existing percentages of commissions which could be granted to wireless operators/air gunner and air gunners at the various stages were maintained, but it was agreed that some flexibility should be permitted in order to ensure that airmen in those categories with the necessary qualifications were not barred from a commission solely on account of the quota. It was agreed that the case of any airman member of aircrew enlisted in a Dominion Air Force who asked to be considered for a commission in the G.D. branch was to be forwarded through the normal channels, whether he was actually recommended for a commission or not, in order that it might be considered by the Dominion authorities. In the event of these authorities wishing to commission an airman who was not recommended in the normal way, the airman concerned was to be transferred to a squadron of the Dominion concerned, or be repatriated, before the commissioning was effected.

The adoption of the principle that everyone who was commissionable should be commissioned was not expected to result in the authorised quota of 50 per cent for pilots, navigators and air bombers being exceeded, at any rate in the R.A.F. The earlier policy whereby 17 per cent of outputs were to be commissioned after operational experience had never been transmitted to units which had received instructions to recommend all commissionable material without limit. In practice, this had worked out at only 4 of the 17 per cent quota being so recommended. This, together with the fact that the United Kingdom had no intention of lowering its commissioning standard for aircrews, made it unlikely that

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(1) See Appendix 18 for the arguments which were put forward at the Ottawa Conference for and against the commissioning of all pilots and observers.

(2) Following a review of the policy relating to the employment of aircrews, which led to the introduction of a new aircrew category of air bomber in May 1942, it was decided to change the title of observer to navigator. (A.M.O.A.746/42).

(3) A.M. File S.81658.

the total authorised quota of 50 per cent would even now be exceeded.[1]

The Commissioning of Flight Engineers

Provision was made in March 1941,[2] for flight engineers to fill posts in certain types of aircraft, but they were given no outlet to commissioned rank. In August 1942, however, the Air Council asked the Treasury for authority to provide flight engineers with an avenue of promotion to commissioned rank following what had already been done for the other aircrew categories. They regarded this as necessary in order:-

(a) To preserve a measure of uniformity in the conditions of service of the various aircrew categories.

(b) To encourage a flow of volunteers for flight engineer duties.

(c) To provide for the general supervision and control of flight engineers in squadrons.

(d) To provide for instructor posts in O.T.U.s and other training units.

The Air Council proposed to establish a number of commissioned flight engineer posts on the basis, for the immediate future, of one for each squadron and operational training unit in which flight engineers were employed or trained. Commissioning on this basis would amount to about 6 per cent of the total number of flight engineer posts. The Treasury agreed to the proposal and the Commands concerned were asked to recommend suitable airmen.

In accordance with the general policy of placing the various aircrew categories on an equal footing, the Air Council decided in February 1943, that the prospects of commissioning for flight engineers should be brought into line with wireless operators/air gunner, i.e. 10 per cent on qualifying and a further 10 per cent after operational experience. The existing establishment limitation of one commissioned flight engineer per squadron or conversion unit should be abandoned. It was agreed in April 1943, that, in order to give flight engineers already qualified a fair chance of obtaining a commission, the method should be to compute 20 per cent of the output of all previous courses, deduct the number already commissioned, and so arrive at the balance still to be appointed.[3]

The Eligibility of Members of University Air Squadrons for Commissions as Aircrew

The University Air Squadrons (U.A.S.) were revived at Oxford and Cambridge[4] in October 1940, in order to meet a situation in which the Army looked like obtaining all the cream of the University population by being able to offer them a practically 100 per cent chance of a commission. In view

(1) A.H.B./IIIC/14.
(2) A.M.O. A.190/41.
(3) A.M. File S.93685.
(4) See Chapter 11 for further details of the University Air Squadrons.

of this, the R.A.F. decided in January 1941, that any man who obtained the U.A.S. certificate of proficiency and was recommended as suitable for commissioned rank by the University Joint Recruiting Board (U.J.R.B.) should be commissioned on the successful completion of his flying training.(1)

Following this decision, a lengthy discussion ensued at the Air Ministry as to whether commissions granted to ex-U.A.S. pupils should be included in the 33 per cent quota of commissions available to pilots and observers on graduation. It was finally agreed by the Air Member for Personnel in July 1942, that in order to honour its pledge to the Universities, the R.A.F. would have to commission outside the quota any U.A.S. pupils who were not included in that selection provided they had been recommended by the U.J.R.B. for commissions on the completion of training and that they had passed out satisfactorily from training. In order to minimise the prejudicial effect on the prospects of other (non-U.A.S.) pupils who were suitable for commissions but who, not being picked material, were likely to pass further down the list than the majority of U.A.S. pupils, the U.A.S. pupils were spread as evenly as possible over all schools when allocations to training were made.

When the pledge had been given to the Universities to commission on the satisfactory completion of training all U.A.S. aircrew candidates who had obtained the squadron proficiency certificate and had been recommended as suitable for a commission by the U.J.R.B., it had been assumed that cadets so recommended would in all cases be regarded as fully suitable for commissioned rank on completing their basic flying training. Experience showed, however, that there were cases where cadets belied their early promise and were considered unsuitable for a commission on the completion of training. The commissioning of such candidates would, it was feared, cause an exceedingly bad impression in Canada (with whom there was already political tension over the commissioning of aircrew personnel) where it would be regarded as the creation of a privileged class of pupil. The Air Ministry, in order to smooth out the situation and to remove the impression prevalent among cadets qualified as above that they would necessarily be granted commissioned rank irrespective of their achievements during training, were, in March 1943, compelled to qualify their pledge to the Universities. Emphasis was laid on the fact that it was necessary not only that cadets should obtain satisfactory results in their ground and flying training, but that the recommendations made by the U.J.R.B. should be confirmed by the appropriate authorities on the completion of training. Cadets who were not then recommended as suitable for immediate commissioning were not to be commissioned but, like all other aircrew, they would be given a chance of a commission after operational experience. Those who were recommended could continue to be commissioned irrespective of the quota. Despite fears that Canada might regard U.A.S. pupils as constituting a privileged class, this last clause was felt to be justified as the U.A.S. pupils, especially the University Short Course cadets, were picked material.

The working of the procedure for commissioning University Short Course cadets gave rise to considerable dissatisfaction.

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(1) A.M. File A.147683/41.

It became evident that any such cadets not commissioned on graduation as part of the 33 per cent quota were disposed of without regard to the trouble and care previously taken in pre-selecting them as potential officer material. There was considerable justification for the belief that Commanding Officers of Service Flying Training Schools lacked a consistent standard as some of the best cadets according to the assessment of the Selection Boards and the University authorities failed to be recommended on completing their training. There was also verbal evidence that in certain S.F.T.S. there was an anti-University complex. In order to remedy the position, the Director General of Personal Services decided in June 1944, that, provided a Short Course cadet had been recommended from his University, he should be commissioned on graduation unless the C.O. of the S.F.T.S. was so convinced that he was lacking in some essential that he wished to submit the matter to the Air Ministry for consideration. In such cases a very full report giving precise information and reasons for not wishing to commission were to be submitted to the Air Ministry who would then decide the case.

A reduction in the Quota of Commissions Available to Pilots, Navigators and Air Bombers on Graduation from Training

The policy of allowing 33 per cent of P.N.B. aircrew cadets to be commissioned on the completion of training came to an end in June 1945. The Air Ministry Cease Fire (Europe)(1) policy required a review of commissioning arrangements to be made at the end of Phase I, and a meeting was accordingly held, under the chairmanship of the Director of Personal Services on 14 May 1945, to consider to what extent, if any, commissioning should be suspended. The meeting considered that in view of the decreased aircrew requirements there would be advantages in stopping all commissioning at the S.F.T.S. stage, and restricting all future commissioning to airmen recommended after productive flying. The situation was complicated to a certain extent by the commitment to commission on graduation all suitable ex-U.A.S. cadets.

In view of this commitment and of consideration of morale among the cadets, who were already suffering from a good deal of disappointment and frustration, it was eventually decided to continue commissioning at the S.F.T.S. stage. The meeting recommended, however, that the quota of commissions allowed to P.N.B. cadets on the completion of training should be cut from the existing 33 per cent to 10 per cent, the other aircrew categories remaining as they were, i.e. 10 per cent for flight engineers and wireless operations (air) and 5 per cent for air gunners. Ex-U.A.S. candidates were to continue to be commissioned in excess of the quota, if necessary.(2) This change in commissioning policy came into operation for those pupils who entered S.F.T.S. and corresponding courses after 1 June 1945. It was approved on 19 June 1945.(3)

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(1) Sections 5 (Item 17) A.M. Cease Fire (Europe) Book.
(2) A.M. File A.791824/45.
(3) Mtg. 9(45) of Directors General in A.M.P.'s Department.

The Phase I commissioning policy for aircrew reached its final form in the spring of 1943 when the pledge to the Universities concerning the commissioning of ex-U.A.S. cadets was modified, and flight engineers began to be commissioned on a percentage basis, thus coming into line with all other aircrew categories. During the preceding three and a half years, the status of all aircrew categories had undergone a certain degree of change. Before the war, the pilot had been in a class on his own and he alone had had a chance to become an officer. The need to attract the right type of candidate compelled the Air Ministry, soon after the outbreak of war, to place the observer on exactly the same footing as the pilot as regards commissioning, status, pay, etc. This same necessity to attract the best type of candidate for flying duties was, later, one of the causes of the increase in the number of commissions available to other types of aircrew.

During the evolution of the aircrew commissioning policy, serious and fundamental differences were revealed between the British and Canadian conceptions of the reasons underlying the grant of a commission. As a consequence, there was disagreement as to the number of aircrew who should be commissioned and as to the stage at which commissions should be granted. Political considerations on this point produced an ultimate policy which was in no small measure a compromise between the divergent views. If the United Kingdom had acquiesced in the Canadian demand for the commissioning of all P.N.B. aircrew, the problem of the re-allocation of aircrew to ground duties towards the end of Phase I and during Phase II would have been even more complex and difficult than was actually the case.

The need to attract aircrew candidates with the potentialities of officers and the desire to prevent the Army absorbing the greater part of the University output by offering students an almost certain commission led the Air Ministry to re-form University air squadrons, and to offer members an equally good chance of a commission in the R.A.F. as in the Army. The same reasons later led to the Air Ministry's participation in the University Short Course scheme under which up to 2,000 potential aircrew trainees could be selected each year for a University course which was designed to broaden their outlook and increase their suitability for a commission. Altogether, some 4,500 prospective aircrew took the courses and the vast majority of them were later commissioned on the completion of their flying training.

Commissioning for Ground Duties

In peacetime, the clear cut division of officers between the several branches had enabled each branch to be dealt with separately in planning entries, except for an inter-relation to some degree on career considerations. The complications of manning policy had been those of careers, classes of commission and sources of entry. In addition, consideration had to be given to such questions as gaining the necessary experience in each rank and availablility for the different types of duty, Staff/Command; and Home/Overseas service. In war, the smaller branches, such as Equipment, Accountant, etc., could still be dealt with separately, but the General Duties branch presented a special problem as many of the duties hitherto associated only with G.D. officers, as well as special duties which had not existed in peacetime, were now being performed by officers of the recently formed Administrative and Special Duties Branch of the Royal Air Force Volunteer Reserve.

It was necessary, therefore, to clarify the position as regards the G.D. and A. and S.D. Branches. In peacetime, allowance had only had to be made for a small number of unfit or non-pilot officers, apart from the proposed separation of technical posts from the G.D. Branch. In war, however, with numerous posts open to G.D. and A. and S.D. officers, a division was essential between those posts which demanded a practical flying experience and those for which such a qualification was unnecessary. Only by such a division was it possible to define the limit to which ground officers could be entered, to determine pilot entries and training facilities, and to conserve pilots for flying duties or appointments in which such experience was required. Maximum allowance had to be made for ground posts to provide relief in war from active flying employment. Such aspects had a material influence on the study of the pilot position.

It was appreciated that a hard and fast division between pilot and non-pilot ground posts might not be completely practicable from a postings point of view and because of the complications of promotion. It was regarded, however, as reasonable for planning purposes to consider certain categories, such as Administrative, Intelligence, Technical, etc., as belonging to the non-pilot classes.

While the problem of manning the G.D. and A. and S.D. appointments depended to some extent on the division of posts between 'pilot' and 'non-pilot', the promotion aspect had also to be taken into account. If this were effected from a common seniority list for all G.D. and A. and S.D. officers for whatever class of vacancy existed, regular G.D. officers who were also pilots would, of necessity, be promoted to non-pilot vacancies. There was already difficulty by the end of 1939 in effecting the number of promotions to squadron leaders that were required as this would have involved the promotion of pilots and their transfer to duties which could easily be performed by non-pilots of the requisite seniority. A rigid limitation of promotions was, therefore, contemplated in order to avoid the consequent drain on pilots. The inference was that there should be at least three distinct branches - General Duties, Administrative and Technical(1) - in which officers could be promoted within their own sphere. It was considered that the Education and Meteorological posts could be ignored in this connection as completely distinct classes of personnel were involved. A separate section did exist in the R.A.F.V.R. for Meteorological officers.

The Formation of the Technical and A. and S.D. Branches

This necessity for a division of posts, both for administrative convenience and to assist in securing enough entrants resulted in April 1940, in the creation of a Technical Branch in both the R.A.F. and R.A.F.V.R. and of an A. and S.D. Branch in the R.A.F. to match that of the R.A.F.V.R. The regular Technical and A. and S.D. Branches would be small as it was decided that entry into them should be confined to existing R.A.F. officers and to regular airmen who were commissioned for those particular duties.(2) The only other candidates to be commissioned in the R.A.F. were Class 'E' reservists who had been

(1) A.M. File S.59268.
(2) A.M. File A.17629/39.

called up on the outbreak of war.(1) All other candidates were commissioned in the R.A.F.V.R.

After the formation of the Technical Branch, engineering, signals and armament specialists of the required standard were commissioned in, or invited to transfer to, the appropriate section of the Technical Branch.(2) Officers whose technical qualifications were not up to the required standard for the Technical Branch, but who could be employed on certain special duties of a technical nature, were granted a commission in the A. and S.D. Branch. This latter branch also included officers employed on administrative, marine craft, photographic, physical training and special duties.(3)

Direct entrants for technical duties were at first entered in the A. and S.D. branch of the R.A.F.V.R. as pilot officer on probation and were not transferred to the Technical Branch until they had successfully completed their technical training and had been posted to a unit for technical duties in an executive post.(4) The number of officers who failed in their technical training proved to be small, however, and, in order to avoid the necessity for inter-branch transfers, it was decided in January 1941, to alter the existing procedure so that officers destined eventually for the Technical Branch could be entered direct into that branch as acting pilot officers on probation during training. Those who successfully completed their training were then regraded in the Technical Branch,(5) while those who failed were transferred to the A. and S.D. Branch if they were suitably qualified. Otherwise, their probationary appointment was terminated.

An Acute Shortage of Officer Candidates by the End of 1940

Direct entrants for technical, administrative and special duties had been obtained fairly readily during the first months of the war, but requirements had greatly increased after the fall of France, and in June and July 1940, special broadcast and press appeals for A. and S.D. candidates had been made. Fifty thousand applications resulted from this publicity, but the vast majority were of little use.

Requirements for A. and S.D. officers continued to rise, and it was estimated in November 1940, that about 1,500 would be required in the ensuing six months. At a conference on the question, under the chairmanship of the Air Member for Personnel, it was decided that further publicity by broadcast

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(1) B.C./C.23425/P.
(2) In order to qualify for the Technical Branch:
  (a) Engineers had to have an engineering degree; or an engineering certificate or membership of an appropriate Institution, with two years practical experience; or a number of years practical engineering experience following an apprenticeship.
  (b) Armament officers had to have a degree which included engineering, physics, or chemistry.
  (c) Signals officers had to have an engineering or science degree; or a diploma of a Technical College or approved Institution and two years experience in telecommunications engineering.
(3) A.M.O. A.228/40.
(4) A.M. Pamphlet 101 (5th Edition) and A.M. File S.62979.
(5) A.M. File A.133956/40.

etc., should be avoided, as the 'rush' publicity in June had entailed uneconomical increases of staff throughout the selection machinery, and a heavy percentage of rejections with consequent repercussions from disgruntled candidates which found expression in the press. It was also agreed that applicants already boarded and rejected should not be reviewed, but that applicants previously rejected on paper categorisation only should be sifted and suitable applicants invited to appear before a Selection Board. This review, which was to include applicants for the Equipment and Accountant Branches, was expected to produce about 1,000 candidates for boarding, of whom about 300 would possibly be accepted.

As only a small proportion of requirements could be met by the recruitment of direct entrants, as many vacancies as possible in the A. and S.D. Branch would, in future, have to be filled by promotion from the ranks. The Director of Manning estimated that the field available for consideration would embrace some 200,000 airmen, but a very large number of these would be under the age limit of 32 years which was imposed for administrative and special duties. The most profitable fields would probably be tradesmen of Groups III and IV and Balloon Command. The policy of meeting the bulk of the A. and S.D. requirements by promotion from the ranks would, in the view of the Air Council, go some way towards removing the anomaly, voiced in some quarters, that, whereas members of aircrew, who did the actual fighting, had to enter the ranks and take their chance of a commission later, the great majority of administrative officers obtained their commissions direct from civil life.

The conference decided to retain the lower age limit of 32 years for commissioning from the ranks into the A. and S.D. branch, with the proviso that those who were medically or otherwise unfit for aircrew duties might be specially considered down to the age of 20 years. In this connection, mention was made of the case of volunteers for aircrew duties who had been rejected on the initial medical examination at a Combined Recruiting Centre and, therefore, had not been assessed either by a Joint Recruiting Board or by an Aircrew Selection Board. Such candidates had no chance of being specially recommended for an A. and S.D. commission.(1) It was agreed that this anomaly should be removed and that such cases should be considered by an Air Ministry Selection Board.(2)

The supply of officers for the A. and S.D. branch still continued to cause serious concern in the spring of 1941. The original programme for the financial year 1940/1941 had been met with a substantial margin, but requirements had increased considerably in the meantime and in March 1941, there was a current deficiency of 975 A. and S.D. and 540 technical officers. In regard to the former branch, although recommendations from the ranks were increasing, it was recognised that establishments grew so rapidly that if they continued on the same scale, it would be increasingly

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(1) U.J.R.B.s and A.C.S.B.s had been instructed in May and July 1940, respectively, that aircrew candidates who were recommended for a commission but who were found to be medically unfit for aircrew duties, should be assessed as to their suitability for a commission in the A. and S.D. Branch (A.M. File A.67373/40).

(2) A.M. File A.120454/40.

difficult to fill posts. In these circumstances, A.M.P. recommended an urgent review of establishments and the consideration of all expedients for conserving officers.

The same considerations applied to the Technical Branch in general. Establishments were increasing daily and, in view of the large requirements of technical personnel in industry and the other Services, it was clear that the resources of the Central Register of the Ministry of Labour would not, in future, be able to supply the R.A.F. with technicians in any appreciable numbers. It was clear, therefore, that, as in the case of the A. and S.D. Branch, future requirements would have to be met mainly by commissions from the ranks. There was a grave risk, however, that if this process were carried too far, the strength of technical N.C.O.s would be dangerously weakened. Here again, it was urgently necessary to overhaul establishments and make the best use of the available manpower.(1)

With this background of increasing requirements and the danger of depleting the strength of technical N.C.O.s, an Air Ministry meeting, at which the Ministry of Labour were represented, considered in April 1941, what additional steps could be taken to supply the balance of requirements of technical officers. In order to meet such requirements up to 31 March 1942, some 1,150 engineers, 950 signals (including radio) officers and 250 armament officers would have to be obtained. The possibility of reducing these figures by downgrading certain posts to be filled by senior airmen was explored but was found to be impracticable.

With regard to the supply of technical officers from within the Service, it was agreed that, although action had already been taken to stimulate the commissioning of technical airmen, the Institutions of Mechanical and Electrical Engineers should be asked to circularise their members and holders of their certificates then serving in the Air Force in case there should be any who were misemployed or who had been overlooked. It was possible, also, that there were officers with technical qualifications serving in a non-technical branch who might be capable, possibly after some further training, of filling posts in the Technical Branch. It was hoped that any such cases would be brought to light by an Air Ministry Order calling upon officers to give particulars of any special qualifications which they might have.

So far as direct entrants into the Technical Branch were concerned, it was decided that the age limits for the branch should be revised to 19 - 60 years and that the applications of all candidates previously rejected on either personal or technical grounds should be reviewed. Candidates possessing lower technical qualifications than were required on entry should be given full consideration and would, if necessary, be given a longer course of instruction. Graduates in chemistry were to be considered for armament duties. Further publicity was to be given, in technical journals and elsewhere, to the needs of the R.A.F. for technical officers. The possibility of recruiting and training, in the United States and in the Dominions, technicians for the Air Force was investigated.(2)

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(1) A.C. Paper 21 (41).
(2) A.M. File A.25352/39.

The Work of the Wireless Personnel Joint Sub-Committee

Various steps were taken early in 1941 with the aim of relieving the shortage of radio and wireless officers by increasing the supply of direct entrants. Foremost among these was the formation of the Wireless Personnel Joint Sub-Committee in January 1941. The aim of the Committee, which was under the chairmanship of Lord Hankey, was to devise means of providing adequate numbers of wireless personnel, both officers and other ranks, for the Services and Industry. One of its first actions was to draw up and introduce a scheme for including radio instruction in all University engineering and science courses, and by the end of 1941 every university in the United Kingdom was providing such fundamental training. In order to check and reverse a foreseeable decline in the numbers of candidates for technical commissions, the committee initiated, in May 1941, a State Bursary scheme which was designed to draw into the Universities for technical training, young men who could not otherwise have afforded this higher education.

Unfortunately, the Royal Air Force lost at least fifty of the Hankey radio personnel who volunteered for the Service in 1941 because the process of placing them in the R.A.F. was greatly delayed by the method of interview. This was described by the committee as 'inefficient beyond words'. Many candidates became exasperated with the R.A.F. administrative machinery and chose to be commissioned in the R.A.O.C. instead.(1)

The Air Ministry interviewing procedure had fortunately been improved by the time that the next batch of candidates presented themselves and, altogether, the radio training scheme provided the Air Force with over 500 men and women for commissioned radio and wireless duties. Besides administering the University training scheme, and another scheme for radio and wireless mechanics at Technical Colleges, the Hankey committee collected information provided by the Universities on previous technical students who were unsuitably employed in the Services.

The Supply of Technical Officers from the United States

Several methods of obtaining officers for technical duties from the United States of America were investigated in 1941. The first of these, which came to fruition, provided for the attachment to the Royal Air Force, for training and subsequent employment on R.D.F. and allied work, of approximately 250 American university graduates who would be commissioned in the United States Army Signal Corps and be styled 'military observers.'(2) One third of these 'observers' were to receive R.A.F. signals training and the other two thirds radio training. On the completion of their training they would be employed on these duties for the remainder of their stay with the R.A.F. which would not exceed one year.

The Director of Manning estimated in August 1941, that the number of technical officers required during the period from July 1941 to March 1943 inclusive, to meet the

(1) 4th Report on the Hankey Radio Training Scheme.
(2) A.M. File S.72837.

requirements of Target 'E' was approximately 5,850.(1) It was hoped that of these, the U.S.A. would be able to provide at least 500 engineers, 200 signals officers and 100 armament officers through the medium of the Civilian Technical Corps.(2) The Civilian Technical Corps soon proved to be a failure, however, and the technicians were not forthcoming. By November 1941, as a result of the work of the Hankey Wireless Committee, the potential supply of radio officers from home sources had improved to such an extent that there was every prospect of meeting commitments without further American help, at any rate for the time being. There was still a serious shortage of other types of technical officer, however, and other possible ways of obtaining at least some of them from the United States had, therefore, to be investigated.

The possibility was accordingly considered in November 1941, of extending the 'observer' scheme to other categories of technical officers besides signals and radio specialists. It was decided, however, that, owing to the length of the training courses (six months for engineers and armament officers), the useful life of the trained observer would be short as to be of little practical value. Moreover, owing to the shortage of training facilities, any such observers could only have been trained at the expense of U.K. personnel who would have given continuous service after training. It was argued, therefore, that it would be better to pursue the possibility of direct recruitment of Americans into the R.A.F. than to ask for an extension of the observer scheme. With the entry of the United States into the war, the chances of recruiting technical officers became even more remote but it then became possible to borrow American technical officers in an active capacity, with no limit on the length of the loan, a far simpler and more satisfactory arrangement.(3)

The Technical Personnel Committee.

The Technical Personnel Committee was appointed in August 1941, under the chairmanship of Lord Hankey, 'to consider and deal with questions relating to the supply and demand of personnel of professional or approximately professional standards, including the determination of priority of demands for such personnel, its economic use, and measures for increasing the supply.'(4) The Committee included representatives of the Ministry of Labour, the Service Departments, the Supply Departments, the Board of Trade and the Ministry of Works and Buildings. The question of the supply of wireless personnel was already being tackled by the Wireless Personnel Committee, and the Technical Personnel Committee decided to concentrate first on the supply of engineering personnel, the greatest need of the Services.

The Technical Personnel Committee took a number of immediate steps to adjust the demand and supply of engineers. One of the first of these was a review of the case of all civil, mechanical, and electrical engineers engaged in

(1) The figure of 5,850 was made up as follows:-

Mechanical Engineers	2,400
Electrical "	600
Signals Officers	1,200
R.D.F. "	1,300
Armament "	350
Total	5,850

(2) See Chapter 10 for further details of the Civilian Technical Corps.
(3) A.M. File S.72837.
(4) P.T.P. (41) 1st Meeting.

civilian work, who had been under the age of 25 when they registered for military service and who came within the scope of the University Joint Recruiting Boards, in order to make a number of them available for appointment to technical commissions in the Services.

The Technical Personnel Committee also enlisted the help of Sir William Beveridge's Committee on Skilled Men in the Services to examine the Services' requirements of technical personnel and to ascertain the extent to which they could be met from their own resources.(1) The Technical Personnel Committee then arranged with the Ministry of Labour and National Service for a series of six month courses to be provided at Technical Colleges for the training of mechanical and electrical engineers.(2) The trainees were servicemen of all three Services who were of the required educational standard and who had had practical technical experience. The course was designed to bring them up to the standard of the Higher National Certificate. The scheme was very successful and altogether approximately 550 airmen completed the course and were commissioned in the R.A.F.V.R.(3)

The Royal Air Force depended increasingly upon promotion from the ranks to fill the growing number of technical officer posts. Besides this intensive training scheme for engineers, which was known as Scheme 'B', the commissioning of technical airmen was made increasingly possible by the grant of state bursaries in electrical and mechanical engineering and in science (radio) which entitled them to a two years course at a suitable university or college.

A Revised Commissioning Procedure for Technical and A. and S.D. Officers

Until August 1942, serving airmen and direct entrants with special qualifications who had been selected for a commission for non-flying duties were granted the rank of acting pilot officer until they had successfully completed their training. They were then regraded as pilot officers and, after a probationary period, were confirmed in their appointment. This procedure gave rise to considerable difficulty, however, in the disposal of candidates who had been commissioned and then failed to make good and it was accordingly decided to introduce a system of cadet entry to commissioned rank.

In accordance with this decision, airmen and candidates with special qualifications direct from civil life who were provisionally selected for commissioning for non-flying duties (except direct entrants selected for commission in the technical, medical and dental branches) who were posted to the initial course at the R.A.F. Officers' School after 1 August 1942, were not appointed to a commission until they had successfully completed the course as cadets. Those who failed to reach the required standard at the end of the course were, in the case of serving airmen, re-posted as airmen in the trade mustering previously held. Failures among direct entrants were normally discharged, but, if they were suitable for ground trades of the R.A.F., could subject to requirements, be given the opportunity of remustering to such trades, or for training therein.(4)

Cadet entry to commissioned rank was extended in December 1942, to entrants from civil life into the Technical Branch of the R.A.F.V.R. Cadets who failed to reach the required standard at the end of the officers' course were

(1) P.T.P. (42) 61.
(2) P.T.P. (42) 50.
(3) A.M. File A.334277/41.
(4) A.M. File A.357531/42.

normally discharged, but those suitable for R.A.F. ground trades were, subject to requirements, given the opportunity for remustering to such trades or for training therein. Cadets who successfully completed the officers' course were commissioned in the rank of acting pilot officer. They then took an appropriate technical course, on the successful completion of which they were confirmed as pilot officers. Officers who failed in their technical course, but who were considered suitable for administrative duties, could be transferred to the A. and S.D. Branch for those duties, provided they fulfilled the conditions as to the age and medical category for commissioning for administrative duties. Officers who were not considered suitable, and those who were not eligible, for transfer, had their probationary commissions terminated, but could be given the opportunity of enlisting in the ranks.(1)

As the manpower shortage became more acute, the Ministry of Labour found it necessary to limit to two years the period which a student could spend at a university. This was not long enough for an undergraduate at any Scottish university or at certain English universities to obtain a degree. Without a degree, he was ineligible for a direct entry commission in the Technical Branch of the R.A.F.V.R., and the Treasury were accordingly induced in November 1943, to agree that the formal possession of a degree by a university candidate for a direct entry commission in the Technical Branch need no longer be insisted upon.(2)

The Formation of a Pool of Potential Officers

Throughout the war, requirements for personnel were continually changing and officer establishments were no exception to this rule.(3) The manning staff could, therefore, never be sure that, asking urgently for recommendations for one category of officer and closing down entries for another, the changing war situation would not result in drastic modifications in target figures so that surpluses arose overnight in categories which had been deficient, and vice versa.

In an attempt to remedy this situation, the Director of Manning proposed in July 1943, that a pool of airmen known to be suitable for commissioning should be built up so that, if and when vacancies arose, the recommended airmen could be posted to training without delay.(4) This was agreed and in October 1943, Commanding Officers were instructed to recommend all airmen considered suitable for commissioning, whether or not vacancies existed for the duties for which the airmen were considered to be particularly well qualified. Wherever possible, C.O.s were to recommend airmen for alternative categories. All recommended airmen were to be interviewed by a Selection Board, even if they were recommended for a category which was closed for the time being. Selection Boards were to select airmen, where possible, for a category that was open and to indicate one or more alternatives. If an airman was considered suitable only for a category that was closed, his name was included in a pool which could be drawn upon as required at any time.

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(1) A.M.O. A.1315/42.
(2) A.M. File A.131044/40.
(3) See Appendix 8 for a table showing the changes in the target establishments of certain officer categories.
(4) A.M. File S.92732.

The 'Deadwood' Policy for the Disposal of Unsatisfactory Officers

In peacetime, the methods of retirement on reaching the age limits and on being passed over for promotion had ensured a continuous review of the suitability of officers for the posts which they held. In wartime, these methods were inapplicable and others had to be adopted. In wartime, also, even more than in peace, it was undesirable that posts should be occupied by officers lacking in energy and drive, or slow in accepting responsibility, or unable to stand up to long hours of work. The Air Council considered the problem in September 1941,(1) and agreed to the necessity for a review of the qualifications of R.A.F. senior officers. Commands had been complaining that they were embarrassed by officers who were either not up to their work or, if up to their work, were blocking the advancement of junior officers to appointments in which their services would be of much more value than those of the officers holding the post. Commands and Directorates were, therefore, asked to compile and forward to the Air Ministry a list of any officers who were considered to have outlived their usefulness or who were recommended as being capable of giving further useful service, but only in a different posting, in their existing rank. The former were placed on the Retired List or relinquished their commissions.

A year later, in September 1942, the then Air Member for Personnel repeated his predecessor's example and asked for the names of any unsatisfactory senior officers. It was reported to him in the spring of 1943 that this 'deadwood' procedure did not go down far enough and the policy was accordingly extended, in June 1943, to ranks below that of wing commander.

It had become obvious by September 1943, that Commands were failing to appreciate the intention of the 'deadwood' policy and were submitting reports which had not been carefully considered. Moreover, there was a tendency to shelter behind it when it would have been more correct to have rendered an adverse report. It was accordingly proposed that a system of superannuation would be a fairer and better means of achieving the desired result, and that officers should be told that they would be retired at a certain age in each rank unless they were specially recommended for retention.

This proposal was fully examined at the Air Ministry, but met with considerable opposition.(2) The Director of Manning opposed it because he was extremely reluctant to acquiesce in the loss of even one officer unless it had been established that there was no appropriate post which he could fill. He emphasised that the replacements for all retirements and resignations of officers had to come from the extremely meagre and diminishing allocations of manpower to the R.A.F. Moreover, to fix an age of 45 years, as was proposed, for the retirement of flight lieutenants when women up to the age of 50 were being considered for compulsory direction into war work would, in his opinion, provoke extremely unfavourable comment throughout the country.

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(1) A.M. File A.448584/42.
(2) A.M. File A.580373/43.

It would be quite impossible to avoid publicity on the subject. To him, the chief advantage claimed for an age limit seemed to be that it would smooth the way of an A.O.C. who felt sympathetically disposed towards officers who, through no fault of their own, could not keep pace with modern developments or stand up to long hours of work. This, the Director of Manning considered, was an inadequate reason for introducing a measure which was bound to react unfavourably on the public conception of Air Ministry administration.(1)

In view of this opposition, the proposal to replace the 'deadwood' policy by one of superannuation was dropped and the former policy continued for the time being. In April 1944, however, the Air Council decided that the 'deadwood' scheme had served its purpose in causing a careful survey of unsuitable officers to be made, and they accordingly decided to suspend its operation.(2)

The Disposal of Officers becoming Surplus to Requirements

Soon after the 'deadwood' policy had been discontinued in April 1944, there was a considerable contraction in Technical Training Command, and, in order to deal with the situation, it was decided to re-introduce the 'deadwood' scheme, in a modified form which would include only officers of the G.D. and A. and S.D. Branches in that Command. These redundancies were caused not only by the contraction of the Command concerned but also by the fact that in the earlier stages of the war, a number of ground officer posts in the training and other spheres which ideally required to be filled by officers with recent operational experience, had had to be filled by older men without flying experience as officers with the necessary qualifications had not then been available. By the autumn of 1944, however, tour expired aircrew were becoming available in increasing numbers for those posts and were gradually replacing the A. and S.D. officers, many of whom were feeling the strain of war on account of their age.

At a meeting of Directors General in the Air Member for Personnel's Department in September 1944,(3) the question was discussed as to whether the 'deadwood' policy should be re-introduced in Flying Training Command, which was also undergoing a contraction, or whether officers declared redundant in their existing posts, who might be suitable for other employment in the post-German war phase, should be posted to a Personnel Holding Unit. After much discussion, it was agreed that Flying Training Command and all other Home Commands should be instructed to apply the scheme already being operated by Technical Training Command. The officers finally declared redundant as a result of this action were to be placed in one or other of two categories. The first and larger category would consist of those officers who, in addition to being redundant, were not suitable for E.V.T. or Control Commission work and exit action would be taken as quickly as possible. The second category would consist of officers whom it would be desirable to hold, if assessed suitable, for post-armistice employment. Any who were finally judged unsuitable would be disposed of in the same way as the first category, but the residue would be posted to a Personnel Holding Unit.

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(1) A.M. File S.86443.
(2) A.M. File A.448584/42.
(3) A.M. File S.102786.

These contractions of establishments also affected officers holding acting rank when officers of the appropriate temporary and substantive ranks became available for re-posting.(1) During the long period of the progressive expansion of the R.A.F. the increase in establishments by ranks had consistently outstripped the temporary promotions made from time to time to fill establishment vacancies and, owing to this lag in the supply of officers with the appropriate temporary ranks, a fairly wide margin had been available for the granting of acting ranks to the officers actually holding the posts. That position was coming to an end in the autumn of 1944.(2)

In view of these widespread contractions and the likelihood of more to follow, the whole question of the disposal of 'deadwood' officers and redundant officers was considered afresh by the Air Council in October 1944. The modified deadwood policy had not yet been applied to all Home Commands and it was feared that, as Technical Training Command had found already, it would not dispose of all the officers who were redundant.

New means were accordingly sought of disposing of surplus officers until such time as the Government scheme for the re-allocation of manpower between the Services and civilian employment during the interim period between the defeat of Germany and the defeat of Japan came into operation. The surplus of officers created by the contraction of establishments, which would then be further accelerated, would be balanced currently by the release of officers according to their release classes. Meanwhile, the Air Council had to dispose of surplus officers by other measures which would operate fairly over the Service as a whole and would be in general accord with the principles underlying the release scheme. With these considerations in mind, they decided in December 1944, to deal with the problem in the following manner:-

(a) Permanent officers on the Active List would normally be retired on reaching the compulsory retiring ages for their substantive or war substantive ranks,(3) and would only be re-employed if there were special circumstances which rendered this necessary.

(b) Permanent officers who had already been placed on the Retired List and had been re-employed would, likewise, normally be reverted to the Retired List on reaching the compulsory retiring age unless there were special reasons which necessitated their further employment.

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(1) A.M. File S.104347.
(2) A.M. File S.104347.
(3) The compulsory retiring ages for regular officers were:-

	G.D.	Technical	Equipment	Accountant
Air Commodore	57	60	60	60
Group Captain	53	55	60	60
Wing Commander	50	53	57	57
Squadron Leader	47	50	53	53
Flight Lieutenant	45	-	45	50

(c) The retention in the Service of non-regular officers of all branches who were aged 50 or over would, henceforth, regardless of rank, be subject to the requirements of the Service. The position of all non-regular officers who had reached that age would accordingly be reviewed and those who could not be further employed would be called upon to resign their commissions. In certain branches it might be necessary to review the position of officers under the age of 50.(1)

Commissioning Policy during the Last Months of the War

It was found in the autumn of 1944 that numbers of airmen undergoing pre-commissioning courses applied to withdraw from the course on the grounds that their acceptance of a commission at that stage of the war might prejudice their chances of early demobilisation.(2) In view of these withdrawals, it was suggested that, as in the case of trade training, commissioning should be directed towards those personnel who were not in early release priorities. The Director General of Manning emphasised, however, that if this policy were applied to commissioning it would cause hardship to the individual who might be deprived of his chance of holding a commission which might prove an important asset to him in civil life after his demobilisation. He therefore suggested, that, in order to avoid penalising these airmen and in order to safeguard the interests of the Service from the point of view of economy, commissioning should be limited, in the case of those likely to be released during the twelve months following the defeat of Germany (Age and Service Groups 1 - 28), to those personnel who volunteered to give at least twelve months effective service after the collapse of Germany.(3)

Following a discussion by the Directors concerned, it was finally decided in February 1945, that all candidates for a commission, irrespective of their release group, should be asked to sign a certificate to the effect that they would give at least twelve months effective service from the date of the first promulgation of release under Class 'A' following the defeat of Germany. If he refused to agree to postpone his release for twelve months, an airman's recommendation for a commission was to be regarded as cancelled. As a result of this imposed condition, many airmen withdrew their applications and it was accordingly impossible to rely upon all those who remained in the pools to meet future requirements. In the case of those who had been in the pools for a long time, it was usually not until they were ordered onwards for pre-commissioning that airmen withdrew their applications. It was decided in March 1945, therefore, to remove from the pools all those airmen who were not willing to postpone their release and, then, to ask units to submit the names of airmen who were recommended for commissioning for all types of duties.

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(1) A.M. File S.104347.
(2) This belief was based on paragraph 20 of Air Ministry booklet, 'The Next Phase', in which it was stated that uniformity of release would not be possible and that this inequality would most probably affect officers and senior N.C.O.s for whom it might be difficult to find reliefs possessing the necessary specialised training or qualifications.
(3) A.M. File A.749051/45.

Future additions to the pool were safeguarded as no airman was accepted thereafter unless he had signed the necessary certificate concerning the postponement of his release.

The position regarding the size of the pools was reviewed in August 1945, and it was then agreed that, with the numbers of redundant G.D. officers available to meet current requirements for ground officers, the pools in the majority of officer categories were sufficient to meet unforeseen commitments and should be closed forthwith.(1)

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The problem of obtaining adequate numbers of suitable candidates for commissions in the non-flying branches of the R.A.F. caused difficulty and anxiety throughout the war. During the opening phases requirements were met with little difficulty as regards numbers but not as regards trained experience, while the problem during the final months of the war was one of disposing of surplus officers rather than of filling establishments, but between these two short phases there was a long period during which ever rising commitments had to be met from dwindling resources. In the attempt to deal with this situation, a succession of measures were introduced, some on a nationwide basis and others in the R.A.F. alone, to increase the flow of suitably qualified candidates and to ensure that their skill and experience were used to the best advantage.

By the summer of 1940, nearly all suitable men of military age who were qualified for commissions in the non-flying branches of the R.A.F. were engaged on work of national importance. At the same time, the combined requirements of industry and the Services were growing apace, and it became clear that if they were to be met, the supply of high grade candidates, both in civil life and from servicemen, would have to be greatly stimulated. To this end, radio courses were included in all University science curricula, State bursaries for engineering and science courses were made available to school-leavers and Service personnel and an intensive engineering course was provided for serving airmen. These various schemes, combined, provided the R.A.F. with well over 1,000 technical officers during the remaining war years, but it had become abundantly clear, as early as the end of 1940, that in order to keep pace with expansion the Air Force would have to rely increasingly upon promotion from the ranks to fill officer posts.(2) Fortunately, the R.A.F. had enlisted much good material at the beginning of the war and appeals to these men to apply for commissions brought forth increasing numbers of candidates. The policy of depending almost entirely upon promotions from the ranks to fill officer

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(1) A.M. File S.92732.
(2) See Appendix 9 for a summary of officer entries.

vacancies had both good and bad consequences. On the credit side it removed the anomaly, which was sometimes criticised, of denying direct entry commissions to aircrews but granting them to non-combatant ground officers. On the debit side, it gave rise to the danger that officer requirements would be satisfied merely at the strength of the equally vital qualified N.C.O.s.

The task of obtaining enough candidates to fill the anticipated establishment was by no means the only difficulty encountered in the manning of officer posts. There was an equally involved problem in obtaining firm establishment figures on which to base entries. Officer establishments, like those of all other types of personnel, were subject to continual and rapid changes which tended to complicate still further the problem of entering the right number of candidates for training at the right time to meet future requirements. In order to promote the necessary degree of flexibility which such conditions demanded, it was decided to establish a pool of selected airmen candidates who could be fitted into training vacancies as and when they were required. By building up this pool over a period when demands were not excessive, the Manning staff were largely successful in forestalling the difficulties which had hitherto arisen when unforeseen and sudden increases had been made to the target establishments. There were certain categories, however, in which the demand was constantly greater than the supply. These were categories such as Meteorology, Photographic Interpretation and Airfield Construction which owing to their specialist nature, could not easily be filled by transferring officers from flying or other duties where there was a surplus at any particular time.

CHAPTER 7

AIRCREW

One of the most difficult and persistent manning problems throughout the war was the provision of aircrew trainees of the right quality, in the right numbers and at the right time. Only volunteers in the strictest sense of the word were accepted, and, whilst the effect of deficiencies in ground trades could have been minimised by resort to various devices, a shortage of aircrew volunteers would have been incapable of remedy. There was no experience of air warfare under modern conditions upon which to base estimates either of the numbers of men who could be expected to volunteer for aircrew duties or of the percentage of trained crews who were likely to become casualties. Further, there was no experience of the standard, type, etc. of men who would volunteer for and stand up to air operations under modern conditions with the war raging over our own country. The strength of adverse opinion and wishes of mothers, wives and sweethearts was very strong. The situation on the outbreak of war was accordingly fraught with great anxiety, and the means whereby volunteers could be obtained in numbers sufficient to meet increasing requirements had to be systematically reviewed and steps taken to remove every obstacle which might prevent the acceptance of suitable candidates.

The strength of the Royal Air Force Volunteer Reserve Air Section on the outbreak of war was approximately 9,000(1) of whom more than 5,650 were pilots in various stages of training. In drawing up the War Training Organisation before the outbreak of war, it had become clear that there would be a problem in dealing with the partially trained R.A.F.V.R. personnel, the limiting factor being the capacity of the Service Flying Training Schools. The programme of absorption into training, prepared in September 1939, indicated that the last of the R.A.F.V.R. pilots would not enter flying training until the end of May 1940. From the training aspect, therefore, an immediate entry of volunteers was not necessary, but other factors had also to be taken into account, among them being the following:-

(a) Commitments as regards candidates already provisionally accepted for Short Service Commissions (approximately 260).

(b) The Dominions personnel who had come over to the United Kingdom to enlist and were in the United Kingdom without financial resources (approximately 100).

(c) The large number of Civil Air Guard members who were anxious to enlist and complete the training which they had received under the C.A.G. scheme, and to whose entry the R.A.F. was virtually committed (approximately 1,500).

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(1) The strength of the R.A.F.V.R. (Pilot and Aircrew Section) on 1 September 1939 was as follows:-

Pilots	5,646
Air Observers	1,623
Wireless Operators/Air Gunner	1,948
Total	9,217

(d) The desirability of taking some of the large number of high quality volunteers who offered their services in the early days of the war and, who, if not accepted, might have been lost to the Air Force and who would have been required if there had been any appreciable expansion of training facilities. Not to have kept open the flow of recruits would have resulted in a possible shortage of personnel in the event of high casualty rates being suffered.

In view of this need to keep open the recruitment of aircrew volunteers, the first monthly recruiting programme provided for 1,000 aircrews and 3,000 W/T Gunners to be accepted for immediate service even though it would mean sending them home on paid leave until they were needed.(1) So many volunteers came forward, however, that a halt had to be called after three weeks as it was clear that training expansion on a scale which would permit the absorption of additional trainees could not be expected for a considerable time. When recruiting was resumed on 27 September 1939, it was accordingly on a new basis whereby recruits were attested and then returned to civil life until they were ordered by the Officer-in-charge Records to report for training. Men on deferred service received no R.A.F. pay and allowances, and were completely free to follow their normal civilian trade, thus becoming a gain to the civilian manpower supplies.

Much criticism had been levelled against the Deferred List, both during the later war years, on account of the extreme shortage of manpower in the country, and since the cessation of hostilities. The formation and maintenance of this reserve of suitable aircrew candidates was regarded as essential by the R.A.F. for a number of reasons, including the following:-

(a) It was imperative that the training facilities for aircrews should be fully employed at all times. There could be no delay in filling training vacancies. The facilities were planned to meet requirements of trained crews and had to be used to the full extent, as delays caused by vacant places could never be made good. There had, therefore, to be a reserve of selected candidates awaiting training, from which the training organisation could be fed.

(b) New training facilities on a large scale were constantly under consideration, but the date of their opening was subject to many factors such as the country in which they were to be established, the building programme, shipping difficulties, aircraft and equipment programmes, etc. The rate of entry into training varied considerably according to such factors as the demands made by Operational Commands, war wastage, weather, etc.

(c) It was essential to pass through the fine mesh of the selection machinery all those who had the desire and keenness to fly, as there was only a very limited number of men in the appropriate age groups who were fully up to the standards required of aircrews, and who would volunteer to fly in spite of parental and other opposition. If these men were lost to another Service, they could not be recovered.

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(1) A.M. File S.46541.

The entire process of recruiting and selecting aircrew candidates of the right quality necessarily occupied a considerable time, and it was considered unsafe to allow the number of men on deferred service to fall below the number representing three months requirements.

The Supply and Demand of Aircrew in the First Months of War

The first preliminary estimate of long term aircrew requirements, which was made in October 1939, covered the three year period from 1940 to 1942 inclusive. Total requirements were estimated at 62,240 pilots, 17,720 observers and 47,352 air gunners. This estimate, which was very much a shot in the dark, was made for the purpose of giving the Ministry of Labour and National Service a broad indication of probable requirements. It was based on requirements to fill the Flying Training Organisation as it existed on 1 January 1940, with an allowance for subsequent expansion, although it was very uncertain whether the estimates of wastage, both during training and on operations, would prove to be at all accurate.

There were five categories of personnel who had to be considered in November 1939 when entry and training programmes were being framed, viz:-

(a) Volunteer Reservists entered before the outbreak of war.

(b) Volunteer Reservists entered after the outbreak of war.

(c) Candidates for the Volunteer Reserve, who had been provisionally accepted in peace time and would have been attested as and when training facilities had become available.

(d) Men registered, but not yet attested, under the Military Training Act, who, but for the outbreak of war, would have been attested and have commenced six months' continuous training between November 1939 and January 1940.

(e) Men registered, but not yet attested, under the National Service (Armed Forces) Act).

It was decided that men in these categories should be disposed of in the following order: all those who were on paid leave were to be absorbed first, and then each training course was to contain an equal proportion of each category in order to ensure equity in commissioning and to ensure that the best candidates were commissioned.

The initial congestion in the Flying Training Organisation gradually cleared, although more slowly than had been hoped, owing mainly to the extension of courses which had been made necessary by the exceptionally severe winter weather. During the second quarter of 1940, however, there was a marked rise in the outputs from training, which was accompanied by a corresponding improvement in the flow of pupils from the Deferred List to the Initial Training Wings. By May 1940, intakes amounted to 800 pilots and 250 observers a month, and plans were made to increase the monthly intake of 2,000 pilots and 700 observers. With this end in view, the Aviation Candidates Selection and Medical Boards were interviewing 1,000 candidates a week and were finding approximately two thirds of them suitable for

training as one or another form of aircrew. The task was no longer only to provide the numbers required for immediate service but also to build up from three to six months supply of the various categories on the deferred list.

Unfortunately, a prospective shortage of aircrew candidates then appeared. The age range for aircrew duties was 18-32 years (except for pilots for whom the maximum age was 28 years), and the lowest age for registration under the National Service Act was 20 years. Aircrew volunteers were, therefore, forthcoming at first from men between the ages of 18 and 20 and from men up to the age of 32 years who had not yet been called upon to register under the National Service Act.(1) The latter field was gradually reduced by successive registrations until, in mid-July 1940, the 31/32 age group was reached. The significance of this lay in the fact that all men within the aircrew range who were aged 20 or more had now become subject to the restrictions imposed by the Schedule of Reserved Occupations, so that large numbers of them who had expressed a preference for aircrew duties on registration were compelled to remain in industry. The percentage of men thus retained in industry increased considerably in the higher age groups.(2)

In an attempt to widen the field of selection for aircrew trainees, the educational standard that was demanded of candidates was considerably modified during the early summer of 1940. The original instructions to the Selection Boards had laid down the School Certificate standard as the minimum that was generally acceptable but had permitted special consideration to be given to candidates who had continued at school up to the age of 16. The Selection Boards were reminded, in May 1940, that they were empowered to accept candidates who had attended school up to the age of 16 and that although the School Certificate standard was desirable, it was by no means essential. It was still insisted that candidates for pilot or observer training should have a good knowledge of mathematics, but the Selection Boards were empowered to accept for wireless operator/air gunner training any candidates who did not reach the required standard in mathematics but who were suitable in all other respects. Later in the month, it was decided that candidates need not have a knowledge of trigonometry. In July 1940, it was agreed that all suitable candidates who had left school before reaching the age of 16, but who had reached the equivalent educational standard by their own efforts or by attendance at night schools should be considered for aircrew training.

The First Review of United Kingdom Manpower Resources to meet the Demand for Aircrew - August 1940

In view of the prospective shortage of aircrew candidates and the proposed expansion of the Flying Training Organisation,

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(1) Serving airmen were also eligible to volunteer, but those of the higher educational standard required for pilot and observer candidates were mainly to be found in the apprentice trades. These airmen were urgently required for technical duties and could not be released at that stage of the war for aircrew duties.

(2) The Schedule of Reserved Occupations debarred 10 per cent of the 20 age group from consideration as aircrews. This figure increased progressively in the higher age groups and reached 70 per cent in the 32 age group.

it became necessary in the summer of 1940 to consider what measures could be taken to stimulate the flow of aircrew volunteers after the maximum age group for aircrews (32) had registered under the National Service Act. To this end, a comprehensive review of the anticipated demand and supply was carried out in August 1940.(1) This revealed that during the three year period 1940-1942 inclusive, a total of 63,000 pilots and observers and 33,000 air gunners would be required from the United Kingdom resources, whereas the prospective supply amounted to no more than 36,250 candidates. It was evident, therefore, that the supply of suitable manpower available from the United Kingdom was, having regard to the existing restrictions and current standards, totally inadequate to meet the demand. The demand for air gunners would be met in a large measure by the selection of serving airmen in the less skilled trades, but, even so, the requirement of 63,000 pilots and observers could not be met and it was essential, therefore, to consider drastic measures to increase the supply. The problem was accordingly approached from three angles:-

(a) The removal of certain restrictions which then operated to prevent candidates being considered under the existing regulations.

(b) The extent to which existing standards could be relaxed.

(c) The extent to which other sources of supply could be made available and the means of improving the standard of potential candidates against the time when they would become eligible for service.

In order to attain these ends, it was proposed that the following action should be taken:-

(a) The co-operation of the Ministry of Labour and National Service should be sought in order to provide for the waiving of the Schedule of Reserved Occupations to the maximum extent in favour of volunteers for crew training.

(b) Medical standards (eyesight and colour vision in particular) should be overhauled and a revision of the upper age limits considered.

(c) Educational standards should be overhauled in order to allow the maximum number to be considered for pilot and observer. The gunner should be scheduled first and foremost on his character, the minimum educational standard demanded of him being sufficient only to enable him to absorb his wireless, gunnery and bombing training. As regards pilots, consideration should be given to the question of whether alternative standards would be possible for candidates required for bomber or fighter duties.

(d) Arising from (c) a scheme at Government expense should be considered for the educational training of youths between the ages of 16 and 18 (and beyond those ages when necessary) who were suitable in all respects except educationally for selection and training as members of crew, thus raising them to the necessary standard by the time they were required to enter flying training.

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(1) A.C. Paper (40).

(e) The manpower resources of the Empire not covered by the Empire Air Training Scheme, together with the resources of other Allied and friendly countries, should be developed to the maximum extent possible.

(f) The War Office should be consulted with a view to the release from Army service of the maximum number of volunteers for crew training.

(g) All ranks of the R.A.F. should be combed with a view to absorbing into aircrew training the maximum number of men who could be made available having regard to the trade position. Commissioned officers of the non-flying branches would also be included in the comb-out although this source of supply would not provide an appreciable number.

Steps taken in the Second Half of 1940 to increase the Supply of Aircrew Candidates

Much was done in the later months of 1940 towards increasing the supply of aircrew candidates by the means proposed in the manpower review of August 1940. One of the first steps to be taken was the raising of the upper age limit for candidates for pilot duties to 30 years to which the Air Council agreed on 22 August 1940.(1)

Meanwhile, it had been decided, also in August, that Recruiting Officers should be instructed to send forward all candidates who possessed a reasonable standard of intelligence and had a reasonable knowledge of mathematics. The fact that a boy had left school before reaching the age of 16 was to be no bar to his acceptance. No educational test was given at Combined Recruiting Centres, and the Presidents of the Aircrew Selection Boards were responsible for assessing the suitability of candidates from this as well as from the personal aspect.(2) A series of intelligence and mathematical ability tests was then being carried out on all candidates at the Aircrew Selection Boards, the object being to obtain an assessment of the general intelligence and mathematical ability which was required in order to be able to pass the mathematics examinations at the Initial Training Wing. Wastage at the Initial Training Wings at that time amounted to approximately 17-20 per cent of the intake.(3) If the tests then being carried out proved to be successful, it would be unnecessary to insist upon any other educational standard, either at the Recruiting Centres or at the Selection Boards, so that no man who had the necessary intelligence and mathematical ability would be ineligible for aircrew training merely on account of his educational background and attainments. It was hoped, moreover, that the tests would prevent the entry into flying training of men who possessed the necessary educational qualifications, but who lacked intelligence to absorb aircrew training. The high rate of wastage in the Initial Training Wings would thus be reduced.

Early in September 1940, the Air Member for Personnel reported to the Air Council the current position with regard to

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(1) A.C. Mtg. 3(40).
(2) See Appendix 16 for details of the method of selection of aircrew candidates.
(3) A.M. File S.64243.

the requirements and supply of aircrew candidates.(1) He said that the Aircrew Selection Boards were accepting only 500 pilots each week and that the intake of pilots to Initial Training Wings, which was based on current training facilities, was approximately 360 a week. With the proposed expansion of training facilities, however, the intake to Initial Training Wings would be increased by 50 per cent within the next six months while, if the United States of America undertook to train R.A.F. pupils, the intake would be still further increased. The number of acceptances by the Aircrew Selection Boards would, therefore, have to be increased by raising the number of candidates appearing before the Boards and by raising the proportion of acceptances. The Air Member for Personnel stated that in order to increase the number of aircrew candidates appearing before the Boards, he was pressing for increased publicity, but he suggested that, in order to obtain the maximum number of volunteers, it would be necessary to widen the field from which they would be drawn. This could only be done by waiving the Schedule of Reserved Occupations for aircrew volunteers. In order to increase the proportion of acceptances by the Aircrew Selection Boards, the Air Member for Personnel asked again that the Air Council should authorise lower visual standards for aircrew candidates.(2)

At their next meeting, the Air Council discussed the Air Member for Personnel's proposals.(3) They authorised a lowering of the visual standards demanded of aircrew candidates and agreed that lists of previously rejected applicants should be scrutinised with a view to re-examining those who were likely to come up to the revised standard.(4) They also agreed that the Minister of Labour and National Service should be approached with a view to waiving the Schedule of Reserved Occupations in selected trades in favour of aircrew volunteers, and that the War Office should be formally asked to arrange for an opportunity to be given to all ranks of Army personnel to volunteer for transfer to the R.A.F. for aircrew training. Finally, they agreed that the University Air Squadrons at Oxford, Cambridge and London Universities should be re-opened.(5)

The Director of Manning was able to report to the Air Member for Personnel in November 1940 that the Army Council had called for applications from officers and other ranks to transfer to the Royal Air Force for aircrew duties.(6) He also reported that investigations were being made into the possibility of increasing pre-entry training by the formation of an Air O.T.C. at public schools and by giving further assistance

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(1) A.C. Paper 34(40), 4 September 1940.
(2) At that time, R.A.F. Medical Boards were rejecting about 21 per cent of all aircrew candidates who came before them. One third of these medical failures were rejected on account of defective vision. A.M. File S.64545.
(3) A.C. Mtg. 4(40) 17 September 1940.
(4) The Air Council had previously declined either to approach the Minister of Labour with a view to having the Schedule of Reserved Occupations waived or to agree to the reduction of the visual standards required of aircrew candidates. A.C. Mtg. 3(40) 22 August 1940.
(5) See Chapter 11 for details of the University Air Squadrons.
(6) Army Council Instruction No. 1520 of 1940 (A.M. File S.65820).

to the Air Defence Cadet Corps. The value of Indians as war pilots was also being investigated and twenty-four of them were being trained as an experiment.

United Kingdom Manpower Resources to meet the Demand for Aircrew in 1941

By mid-November 1940 the Secretary of State for Air was able to report to the War Cabinet that the output of pilots and other aircrews was greater than the number required to maintain the Royal Air Force at its current strength, and that by March 1941 the accelerated flow of trained personnel should make possible an increase equivalent to thirty squadrons. This change from the serious position in the summer of 1940 had been achieved by shortening courses, by transferring some training from Flying Training Schools to Operational Units and by the over-bearing of pupils. Moreover, the setting up and expansion of overseas training schemes had made more rapid progress than had been expected.

All these factors combined to increase the number of pupils required and the rate at which they could be called up for training from the somewhat slender Deferred List. It became necessary in December 1940, therefore, to make a further examination of the estimated requirements and supply. By that time, the programme for training expansion was sufficiently clearly defined to admit of a reasonable forecast of the demand for the thirteen month period from December 1940 to December 1941 inclusive. No difficulty was expected in meeting the requirements for air gunners as the supply was augmented by candidates entered for ground duties who volunteered for crew duties while undergoing training as wireless operators. The examination of December 1940 was, therefore, confined to pilots and observers of whom 40,500 and 4,500 respectively would be required during the period under review. It was estimated, however, that only about 26,800 suitable candidates would be forthcoming, thus leaving a gap of some 18,200 between the anticipated supply and demand.

Further measures to increase the supply of aircrew candidates and the fuller implementation of measures already decided upon were clearly needed and on 10 December 1940, the Air Council decided to modify the current practice of dissuading recruits from entering flying training before reaching the age of 19 years and to advance the age to 18¼ years.(1) They also decided that instructions should be given to medical boards not to reject candidates with disabilities which would not be likely, within a period of three years to become so aggravated as to render them unfit for aircrew duty.(2) The existing practice was to reject candidates who were, or could be, fully effective aircrew but who had disabilities which might later involve non-effective liabilities. A positive disability disqualified even if only gradual deterioration was to be expected but by the end of 1940 the need for suitable personnel warranted acceptance of the financial risk involved.

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(1) Until July 1940 the minimum age for recruitment for aircrew had been 18 years. It was then decided to discourage entry into I.T.W. before the age of 19 and strong pressure had been brought to bear on candidates below that age to accept ground employment or deferred service in the interim. (A.M. File A.908111/47).

(2) A.C. Mtg. 11 (40), 10 December 1940.

Late in 1940 the Manpower Requirements Committee suggested the appointment of a central authority empowered to alter the Schedule of Reserved Occupations in consultation with departments and interests concerned. In spite of considerable opposition from the representatives of the supply departments, all of whom were concerned with the possible effect of the proposal on the labour available for production, a relaxation of the Schedule in respect of volunteers for pilot or observer duties was agreed to by the Manpower Priority Committee on 2 January 1941.(1) It proved a most valuable concession and by the end of 1941 had increased the supply of pilots and observers by more than 13,000.

The need for a considerable increase in publicity for aircrew recruiting, which had been emphasised by the Manning staff, resulted in approval being given at a meeting on 6 December 1940, (presided over by the Under Secretary of State for Air) to a publicity programme involving an estimated expenditure of £125,000 over the period November 1940 to March 1941, mainly on aircrew recruiting. Expenditure on aircrew publicity was maintained at approximately £20,000 a month from January 1941, (an earlier start was inadvisable) up to the end of March. Results did not warrant an increase or a decrease of this amount during the quarter.(2) For the programme for April onwards, however, a decrease seemed practicable in the following circumstances. The Deferred List of candidates who had passed the A.C.S.B. and medical examination, and had been attested, amounted to 11,000 at the end of March. In addition, there were some 11,000 volunteers awaiting interview from whom it was anticipated that 3,000 pilots and observers would be obtained. The total from these two sources was, therefore, 14,000. As intakes over the next few months were expected to vary between 2,000 and 3,000, this figure represented between 4 and 5 months supply. A further 7,500 would probably be forthcoming from recent N.S.A. registrations. In view of the size of the Deferred List and the probable flow of recruits, it was agreed that, as an experimental measure, expenditure on aircrew advertising should be reduced in April by 25 per cent, i.e. to £15,000.(3)

Meanwhile a scheme for pre-entry training on a nation wide basis had been evolved and put into effect. In order

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(1) This relaxation was, in fact, a reversion to the freedom enjoyed under the peacetime Schedule of 1939 when only men from a few occupations of the greatest importance were barred from acceptance in the R.A.F.V.R. or A.A.F. as aircrews. (A.M. File S.49737).

(2) During the months November 1940, to March 1941, the following sums were spent on aircrew recruiting publicity and the following numbers of aircrew recruits obtained:-

1940	Recruited	Expenditure
November	2,973	£7,140
December	2,776	£8,000
1941		
January	3,425	£20,000
February	4,256	£19,400
March	5,348	£19,000

(3) A.M. File C.S. 8343.

to raise the educational standard of otherwise suitable aircrew candidates, a scheme had been introduced in 1940 for part time instruction to be given to selected individuals under the guidance of the Local Education Authorities, but it became clear that preliminary education of this kind would be required on a nation wide basis and the Air Member for Training was invited to formulate an appropriate scheme. As a result, the Air Training Corps was formed in February 1941 as a comprehensive training organisation in which would be merged three existing organisations: the University Air Squadrons; the Air Contingents of the O.T.C.; the Air Defence Cadet Corps.(1) The aim of the Air Training Corps was the widening of the field of selection for aircrew by helping candidates to reach not only the educational but also the medical standards demanded by the Selection Boards. It was hoped too, that A.T.C. activities would encourage a greater proportion of the country's youth to volunteer for R.A.F. service, especially for aircrew duties.

The Third Review of Requirements and Supply for Aircrew - May 1941

With the above remedial measures under way, the future requirements and supply of men for crews were again examined in May 1941, in order to see what effects these measures were having and to review the problem in the light of the latest policy developments. The requirements for 1941 were fairly definite, but there was considerable uncertainty about 1942 as it had not yet been decided whether the training organisation planned for the end of 1942 was to be further expanded beyond the current Target Force or whether the maintenance only of this force was required. In the latter event, the demand for aircrews would be reduced, but on current planning, 40,300 pilots and observers would be required during 1941 and a further 57,000 in 1942, making a total requirement of 97,300 for the two years.

The main source of supply would be the manpower of the United Kingdom which, during the period in question, would reach the age of 19 and become eligible for service as volunteers or as National Servicemen. Sufficient evidence had been obtained by May 1941, to show that there was a far higher proportion of options for Air Force (flying) service from the younger age groups than from the older groups. There were also indications of improved acceptance rates throughout the various stages in the process of breaking down the gross number of registrations to those candidates finally accepted by the Selection Boards as suitable for aircrew training as pilots and observers. For instance, in August 1940, 15.5 per thousand of the registered population were found to be finally acceptable, but this figure had risen to 32 per thousand by May 1941. This improved rate of acceptance reflected the effect of expedients decided upon in the earlier reviews, such as the waiving of the Schedule of Reserved Occupations for aircrew candidates and the modified medical and educational standards. Moreover, the field of aircrew recruitment was now confined to the younger age groups who had fewer marital and other responsibilities.

(1) See Chapter 11 for details of the Air Training Corps.

Although United Kingdom manpower of the 1920-1924 age groups was expected to provide about a half of the men available for aircrew training during 1941 and 1942, this was by no means the only source of United Kingdom manpower that was expected to become available. In addition to the 40,900 men which the 1920-1924 age groups were expected to provide, the deferred list as at 1 January 1941, was expected to yield 7,100; volunteers from among serving airmen, 13,700; transfers from the Army, 6,000; and releases from the Schedule of Reserved Occupations, 10,000. It was hoped to obtain about 6,500 Dominion and Allied Nationals, thus making a total expectation of some 84,200 men from all sources during 1941 and 1942.

The estimated supply for 1941 and 1942 combined, therefore, fell short of requirements by 13,100, although the demand for 1941 alone was expected to be met with a margin of 21,000, which was equivalent to approximately four months supply for the following year, so that a rapid deterioration in the situation was expected in 1942. Some benefit was expected to accrue from the Air Training Corps during 1942, although the full benefit could not be expected so soon after its inception. In all these circumstances it was decided that:-

(a) Publicity should be maintained in order to encourage a greater proportion of options for crew duties.

(b) A deferred list should be maintained equivalent to a minimum of six months supply of candidates. Should the progress of the war and conditions in the Empire render so long a period undesirable, there would have to be an extension of the pre-I.T.W. training on stations or of the I.T.W. course.

(c) In due course the War Office should be pressed to continue the release of Army personnel beyond the current year and to take steps to encourage a greater number of men to volunteer for transfer to the R.A.F. in order to ensure that the full quota promised for 1941 should be made available.

(d) Full advantage should be taken of resources of manpower outside the United Kingdom and the Dominions (i.e. U.S.A., Allied Nationals, etc.)(1)

The Air Council agreed to these proposals when they discussed the manpower position on 20 May 1941.(2) At a meeting of the Recruiting Publicity Committee a few days later(3) it was stated that on current indications the Deferred List for pilots which was then at about the six months mark (14,000), would be down to 2-3 months by the middle of 1942 and would be extinguished altogether by the end of that year It was vital to get hold of the men at once if a serious position in 1942 was to be avoided, and it was accordingly decided to increase to £19,000 a month the amount spent on aircrew recruiting publicity, Recruiting statistics of the previous six months showed that the only period when the full

(1) A.C. Paper 31 (41).
(2) A.C. Mtg. 10 (41), 20 May 1941.
(3) A.M. File C.S. 8343.

requirement of 2,500 approved applicants weekly had been obtained had been during the period January-March, when £20,000 a month had been spent on recruiting publicity.

The Fourth Review of Requirements and Supply of Manpower for Aircrew - October 1941

By October 1941, the expansion of the United States training facilities had made necessary a fresh examination of the requirements and supply of aircrew candidates for the period July 1941 to December 1942. Requirements had increased by some 43,000 since the previous estimate, but the anticipated deficiency by the end of 1942 had only increased from 13,100 to 23,800. In order to keep this gap so small, however, the deferred list would have had to be reduced to less than three months supply by the end of 1941 and the supply exhausted by the end of June 1942. If, in accordance with current policy, a reserve equivalent to six months supply of candidates was maintained, the deficiency by the end of 1942 would have risen to 67,000.

Although this latest review showed a considerable increase in the anticipated supply of candidates, it disclosed a situation sufficiently serious to warrant no slackening of effort if the prospective shortage was to be overcome. It was still too early to forecast with any degree of accuracy the benefit likely to accrue from the Air Training Corps and, although profit would certainly materialise from it, no reliance could be placed upon it to solve the aircrew shortage. It was clear, therefore, that, in order to safeguard the position, the following steps were essential. First, the current intensive recruiting publicity would have to be continued. While this was directed primarily towards the civilian manpower, its effect on serving airmen and soldiers was also of considerable value, particularly when the Army and Dominions were being pressed to allow their soldiers to transfer to the R.A.F. for aircrew duties. Secondly, consideration would have to be given to the extent to which it was possible to recruit Allied nationals for crew service over and above the specific needs of Allied squadrons. Thirdly, the possibility of recruiting crew candidates in the U.S.A. would have to be thoroughly investigated.(1)

The situation with regard to both the requirements and supply of aircrew candidates had changed considerably by the end of 1941. The slowing down of the bomber expansion indicated that the anticipated deficiency of 23,800 crews at the end of 1942 would be greatly diminished or removed. It was also possible that the numbers likely to be produced by the Air Training Corps had been underestimated. Against this anticipated improvement in the position, it seemed unlikely that the 22,000 transfers expected from the Army by the end of 1942 would materialise.(2) The home recruiting field for the future was very limited, being practically confined to volunteers between the ages of 18 and 18½, to men who became de-reserved and to reserved men who volunteered. As

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(1) A.C. Paper 60(41).
(2) In fact, the final total of transfers from the Army was only 10,126 of whom only 173 were transferred in 1942. (R.A.F. Personnel Statistics for the period 3 September 1939 to 1 September 1945).

reservation was no longer a bar to any person applying for aircrew duties, little more could be expected from that source. Moreover, with the increasing use of the Army, particularly the mechanised Army, the number of volunteers for aircrews from that source was likely to diminish. Very roughly, therefore, the position in early 1942 was that, allowing for expansion as replanned and for intakes from all known sources being up to expectation, there would probably be a small margin at the end of the year to help meet the demand for 1943. It was clear that at some stage in the fairly near future the R.A.F. was bound to have difficulty in meeting its commitments and would be compelled to extend the field of recruitment beyond the home resources.

The Fifth Review of Requirements and Supply of Manpower for Aircrew - March 1942

As a result of the retardation of expansion, the demand for pilot and observer candidates was much reduced, thus improving the position considerably. A review of requirements and supply of aircrew candidates which was made in March 1942, covered the two years period from January 1942 to December 1943, the latter date being the objective date for the completion of the revised Target 'E' force, although the demand for candidates was to meet an operational requirement beyond that date. In this respect, therefore, the demand for 1943 could be regarded as provisional only and subject to modification in the light of definition as to the further development of the force beyond the current target. The total requirement of pilots and observers for the two years under review was 108,500, including 54,600 in 1942. This latter figure represented a reduction of 32,400 on the previous estimate of requirements for 1942.

As previously, the main source of supply of crew candidates was expected to be young men reaching the age of 18. On the evidence of recent registrations, it was assumed that 14 per cent of the population registered would register for crew service. Hitherto, 15 per cent options had been assumed but that had been based on the registration of older classes whereas now the 18 age group alone was concerned. On this assumption, approximately 139,000 options were expected during 1942 and 1943. Of these, about 29,700 would probably be acceptable as pilot or observer. In addition, some 8,340 pilot trainees would be diverted to observer training, 20,800 would be called up from the Deferred List, 21,000 serving airmen would be selected for crew training, 6,000 men would be released from reserved occupations and a further 6,000 men would be obtained from among Dominion and Allied Nationals.

In all, therefore, it was considered that there should be approximately 91,840 men available for aircrew training in 1942 and 1943 as compared with a demand for 108,500, thus leaving a gap of 16,660. This unfavourable position was, however, considered to be capable of improvement by an increase in the proportion of acceptable candidates owing to the higher standards of Air Training Corps candidates.(1) The

standards of Air Training Corps candidates.(1) The conclusions reached from this review were in many ways a re-statement of earlier conclusions. They were as follows:-

(a) That no reduction of publicity measures was desirable if the position was to be maintained but that publicity should also be directed to the encouragement of youths to join the A.T.C. with a view to eventual crew service.

(b) That standards and ground training in the A.T.C. should conform as near as possible to that required for R.A.F. service in order to ensure that on completion of A.T.C. training the great majority were acceptable and immediately available for service with the R.A.F.

(c) That no modification in medical and visual standards which would limit the availability of acceptable candidates was desirable unless for considerations of safety.

(d) That the recruitment of Allied Nationals should continue to the utmost extent possible over and above the specific needs of Allied Squadrons.

A New Crewing Policy - April 1942

Several factors combined to bring about a change, in the spring of 1942, in the crewing policy, including the introduction of the one-pilot policy, for heavy and medium bombers. Experience had shown that, in order to cope with the more complicated types of aircraft, pupil pilots required longer periods of flying training which could only be given by increasing training facilities or by reducing the number of pupils. Moreover, in squadrons with two-pilot crews, the second pilots received few, if any opportunities on operational sorties to fly the aircraft and, consequently, they deteriorated in flying skill. The crux of the matter, however, was the number of pilots required. In order to maintain the two-pilot crew in heavy and medium bomber squadrons, it was estimated that a total output of over 4,500 pilots per month would be required as compared with 3,500 per month on the one-pilot basis.

For all these reasons, therefore, it was decided to employ only one pilot in each heavy and medium bomber crew. Each crew, however, was to be provided with a pilot's mate whose tasks would be undertaken by the flight engineer in those aircraft where one was carried. The pilot's mate assumed the responsibility for assisting the pilot in the operation of the cockpit controls and, in the event of the pilot becoming a casualty, would be called upon to fly the

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(1) The following percentages of N.S.A. and ex-A.T.C. candidates were being accepted and rejected for aircrew training in the Spring of 1942:-

	Accepted		Rejected
	Pilots or Observers	A.G.s	
N.S.A. Candidates	33.5%	14.5%	52%
Ex-A.T.C. "	72.7%	16.5%	10.8%

aircraft back until it was over friendly territory. A further amendment to the composition of the crew was the reduction from two to one in wireless operators/air gunner. The second W.O./A.G. was to be replaced by a straight air gunner in aircraft carrying a dorsal as well as a tail turret.

Experience in night bombing with the latest aids to navigation had shown that the observer had to leave his navigating position sooner than was desirable from the point of view of navigation if he was to have sufficient time in the bomb aimer's position to get his eyes adapted for the difficult tasks of target location and use of the bomb sight under night conditions. This had led to a decision to split the observer's functions between a navigator and a bombardier,(1) each of whom would remain throughout the flight in his respective position, except that the bombardier would also act as front gunner when needed.(2)

The reduction to the one-pilot basis meant that the R.A.F. was faced with considerable increase in the surplus which had already built up as a result of delays in expansion. It was, therefore, decided to extend all Service Flying Training School courses from 16 weeks to 24 weeks. On current requirements, this would, it was estimated, give the requisite flow of pilots on the one-pilot basis for the following twelve months.

The Sixth Review of Requirements and Supply of Manpower for Aircrew - November 1942

This revised crewing policy, together with the agreement reached with the United States of America in June 1942,(3) which brought to a virtual close the supply of American aircraft to the R.A.F., made necessary a re-calculation of aircrew requirements, but it was not until November 1942, that the position was sufficiently stabilised to allow a further comprehensive review to be prepared for the Air Council. This sixth review covered the period July 1942 to December 1943, inclusive, and covered all categories of crew personnel. Since the first review in August 1940, the surveys had been concerned with the pilot and observer categories only, but in view of the growing importance of other categories, both as regards standard and numbers, and the manpower stringency especially in the lower ages, it was thought desirable to make this review comprehensive by covering the whole range of crew duties.

The review showed that 1943 would open with a surplus of 26,400 in the P.N.B.(4) categories and would probably end with a surplus of 19,700. The position with regard to 'other aircrew' was not so good, there being a deficiency of 6,200 at the beginning of 1943 which was expected to increase to 31,400 by the end of that year, giving an overall crew deficiency of 11,700 at the end of 1943.

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(1) The Air Council decided that the bombardier should be given the title of Air Bomber.
(2) A.C. Paper 27(42).
(3) The Portal-Arnold-Towers Agreement.
(4) Pilot, Navigator and Air Bomber.

The main reason for the improvement in the P.N.B. outlook was that the flow of potential candidates had been accelerated six months by the reduction of the call-up age from 18½ to 18 years. Hitherto, men below the age of 18½ had been eligible only as volunteers. Legislation was in train to provide for men to register a few months before reaching the age of 18 in order that they might enter actual service on reaching 18 years. The number then being found suitable for P.N.B. categories was 38.5 for every 1000 of the population registered while 50.5 were found suitable for 'other crew'. These ratios compared with 30.6 and 45 respectively in October 1941.(1) This improved acceptance rate was attributed mainly to the increased proportion and higher standard of A.T.C. cadets who were coming forward for R.A.F. service. The exception of P.N.B. candidates from the operation of the Schedule of Reserved Occupations continued to give good results and was expected to provide some 14,400 men during the period under review. Another 14,200 serving airmen were expected to volunteer for P.N.B. crew duties.

Certain conclusions could be, and were, drawn from this review. The field of potential aircrew candidates had increased mainly as the result of the decision to reduce the age of compulsory service to 18 years. The quality of candidates was, in general, on the upward trend, but the position was still capable of some improvement through the medium of the A.T.C. The immediate problem of short supply was now in connection with 'other crew' categories. There was a risk of not meeting the immediate future demands for qualified airmen acceptable for training as flight engineers. Considerable difficulty could be expected in meeting requirements subsequent to 1943.(2)

Developments in Late 1942 and in Early 1943

Even before this manpower review could be discussed by the Air Council, it had become largely academic owing to the drastic cut which the Prime Minister had just made in the R.A.F. manpower demand for the period from July 1942 to December 1943.(3) After allowing for recruits already enlisted in advance, the R.A.F. intake of men in 1943 would be limited to 60,000. The great majority of these would be required for aircrew training. All the aircrew personnel required to meet 1943 requirements and a part of those for 1944 were already in training. On account of the cut, there would probably be some delay in absorbing the trained aircrew personnel towards the end of 1943.(4) The main concern at this juncture was whether the supply of volunteers would meet operational requirements in the latter half of 1944 and throughout 1945. The sense of urgency was increased by the knowledge that the landing on the Continent would probably be made early in 1944.

The Prime Minister's cut had other effects on the R.A.F. aircrew policy. The entry of all A.T.C. volunteers for aircrew duties was no longer assured as it was doubtful whether the R.A.F. would be able to absorb them all. Much effort had

(1) A.C. Paper 60(41).
(2) A.C. Paper 80 (42).
(3) W.P. (42) 556. See Chapter 4.
(4) A.C. Mtg. 21 (42).

gone into building up the Air Training Corps and failure to accept all optants for R.A.F. service could not fail to cause disappointment and to have a serious effect on the future position. In view of the fact that the A.T.C. output would probably meet the reduced aircrew requirements, the Air Council agreed that publicity in support of aircrew recruiting should cease for the time being. In view of the limitation on the number of aircrew candidates to be entered from civil life, aircrew recruitment within the Service took on an even greater importance. Its intensification, however, would naturally result in deficiencies of ground personnel being increased in proportion to the numbers coming forward for aircrew training.

The question of the educational standard of P.N.B. category aircrew was causing concern in the autumn of 1942. The Air Member for Training stated in December 1942, that, during a recent period of three months, about one third of the personnel selected as pilots and navigators had received little more than elementary education. With the increasing complexity of equipment, it had been found that the courses of instruction tended to be beyond the capacity of men without an adequate basic education. As it was likely that an even greater proportion of personnel not up to the requisite educational standard would have to be accepted in future, and in order to maintain efficiency, it was essential to take steps to give otherwise suitable candidates some further education of a general nature before they proceeded to their Service courses of instruction.(1) It was therefore decided that educationally deficient aircrew candidates should be called up six months in advance of the date on which they were to enter an Initial Training Wing and were to attend a six months educational course as airmen (receiving R.A.F. pay and emoluments and being subject to R.A.F. discipline). The first course under this scheme, which was known as Preliminary Air Crew Training (P.A.C.T.), began in March 1943.(2)

The Seventh Review of Manpower Resources to meet the Demand for Aircrew

The seventh review of the manpower resources which were available to meet the demand for aircrew was made in September 1943, and covered the demand and supply for the period from July 1943 to December 1944 inclusive. The requirements for the P.N.B. categories for the eighteen months in question amounted to 66,400, and those for the non-P.N.B. categories to 68,250, a grand total of 134,650. Of these, 91,300 would be required during 1944.

The primary source of supply was expected to be the young men who had still to be registered under the National Service Acts and who would become available for service on reaching the age of 18. During the period under review, the second half of the 1925 class and the 1926 class were concerned, and were expected to yield some 13,000 acceptable candidates. Other sources of supply included the relegation of failures under P.N.B. training to other crew categories, men who were on the deferred list in July 1943, candidates from serving airmen, candidates in reserved occupations accepted under the waiver

(1) A.C. Paper 86 (42).
(2) See Chapter 11 for further details of P.A.C.T.

procedure, and seconded Army officers and Dominion and Allied Nationals. All these sources combined were expected to yield 128,500 candidates so that by the end of 1944 there would be a deficit of 6,150 candidates. The position would be made worse to the extent that future acceptances were not made available for immediate service within the period under review.

The Period of Contracting Aircrew Requirements

Very soon after this estimate of the demand and supply of aircrew candidates in the second half of 1943 and in 1944 had been made in September 1943, there was a substantial drop in requirements, and R.A.F. aircrew policy changed from one of expansion to one of contraction. Throughout July and August 1943, the Air Ministry had been pressing Canada to increase her aircrew training facilities but by the end of the year, it was necessary not only to countermand any increases but also to reduce existing facilities. The reasons for this changed position were an improved strategical position, a revised aircraft production programme and a reduced casualty rate, the combined effect of which was a reduction in the forecast aircrew requirements for 1944. A considerable reserve of aircrew which already existed in squadrons and in operational training units would go far towards meeting the requirements of any sudden intensification of effort. Action was accordingly taken in December 1943 to reduce margins and eliminate 'pools' of personnel in the training pipeline, but the full benefit of this would not be felt for some time since accumulated surpluses could only be absorbed over a period. Meanwhile, however, the Air Council had decided that plans should be based on the assumption that Germany would be defeated by the autumn of 1945. This would automatically create further surpluses which would also have to be absorbed. The elimination of these pools and margins would result in a substantial reduction in the aircrew intake requirements for 1944. As a first step towards regulating the position, all intakes for P.N.B. aircrew duties were stopped in November 1943, and it was decided that they should not be resumed until the spring of 1944.(1)

So far as the supply of aircrews was concerned them, the problem had now become one of surpluses rather than one of deficiencies, and many difficulties were to arise during the remainder of the war in connection with the continued recruitment of aircrews and the use of the Deferred List. At the beginning of 1944, there were large surpluses within the training organisation and, as a result of the lack of balance in the numbers on deferred service who had been provisionally selected for the various categories of aircrew, there were abnormally long waiting periods before call-up for training. While recruits were on deferred service, they were screened from other forms of National Service, a state of affairs, which, in view of the long periods now being spent on deferred service and of the National manpower position, needed to be modified. Although many men of the right type continued to volunteer, the expectancy of this long period on deferred service encouraged some men of the wrong type to volunteer for flying duties. Men whose only aim was to avoid any form of combatant service opted for flying training (the only means of entering the R.A.F. at that time), spent a long time on the deferred list,

(1) A.C. Paper 90(43).

failed their aircrew training and then remained in the R.A.F. as ground personnel. Flying Training Command reported in March 1944,(1) that many men were joining the R.A.F. in order to avoid at all costs being drafted into the Army or into the coal mines. Voluntary withdrawals from training as air gunner and failures to attain a pass standard had risen to 10 per cent of the intake. In the case of voluntary withdrawals it was apparent that in many cases the man had never had the essential fighting spirit to become an aircrew. Measures were introduced to hand over the deliberate failures to the Army for combatant duties.

Revised Methods of Aircrew Classification and Allocation

In view of the situation outlined above, it was clear in the spring of 1944 that much of the criticism which had already been made against the deferred list would rapidly become justified unless urgent steps were taken to carry out the re-selection and re-allocation of aircrew candidates. From every point of view, the time seemed opportune to announce that all volunteers for aircrew training would begin on a common footing and would compete for the category in which they were to be trained.

From 1 April 1944, therefore, a new procedure of special tests and final classification during training was applied retrospectively to recruits who had already been called up and were still in the early stages of training, but who had not been finally classified.(2) When recall to initial training was resumed at the end of the month for all categories except wireless operator (air), the new procedure was also applied to new entries into training. Notice of the new procedure was also sent to all P.N.B. candidates enlisted before 20 August 1943, (later candidates were all informed that selection was only provisional), and, unless they were subject to the Schedule of Reserved Occupations, they were given the option of transfer to the Army or Navy if they were not prepared to accept the new conditions. A.T.C. personnel who had been attested as P.N.B. candidates could refuse re-allocation and then be considered for ground employment if they were not subject to the Schedule of Reserved Occupations. The decision to reclassify candidates was not applied to cadets who were taking the University Short Course or to members of the University Air Squadrons: all these candidates were classified as P.N.B.

Steps were taken to ensure that the decision to reclassify was conveyed to all cadets in as sympathetic a manner as possible. Special instructions were issued to the Officers Commanding the Units concerned and, in addition, a statement was handed or sent to every cadet personally.(3)

The Employment of Surplus Aircrew Personnel on Ground Duties

By this time (April 1944), it had become necessary to take special measures for the classification and employment of aircrew personnel for whom non-operational flying employment

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(1) A.M. File S.99152.
(2) See Appendix 17 for a diagram showing the Aircrew Selection and Classification Machinery.
(3) A.M. File S.99180.

was not available during the period between their first and second operational tours and after their second operational tour. Instructional and other non-operational employment was normally available for all pilots and for nearly all navigators, but a much smaller number of instructional posts was available for the non-P.N.B. categories, particularly air gunners. Hitherto, such personnel had, in the main, been held supernumerary on the strength of Commands but by the spring of 1944 the numbers were such as to cause embarrassment to Commands. It was clearly desirable, both for general manpower reasons and also from the point of view of the individual, to ensure that all such personnel were properly employed.

It was accordingly decided to set up a unit, similar to the Combined Re-selection Centre, at which all aircrew personnel returning from overseas or coming off operations, and not immediately absorbed in vacancies in their own Command, could be vetted and classified for other employment. It was hoped that it would be possible to find employment in posts requiring aircrew experience for all officers and for a large proportion of the airmen.(1) There would, however, be a residue of airmen for whom such employment would not be available, and it was proposed that such personnel should be employed, both in the interval between operational tours and on completion of their second operational tour, on the duties of their trade. Those who had no trade would receive instruction in one. All of them would remain liable for further aircrew employment and, wherever possible, would be kept in flying practice. They would continue to receive the pay of their aircrew category.(2)

The Reduction of the Deferred List

Aircrew policy underwent a further change in July 1944, as a result of the War Cabinet decision to cut the Deferred List in order to provide men of Grade I medical category for the Army.(3) The War Cabinet decided that 10,000 men should be put at the disposal of the Ministry of Labour and National Service for transfer to the Army. Six thousand of them were to be released from the Deferred List by the end of August and the remaining four thousand by the end of October 1944. Moreover, 4,000 men in reserved occupations were not to be recalled from deferred service and the Deferred List was to be reduced to three months supply by the end of the year.(4)

The War Cabinet decision raised the question of the fairest method by which the recruits for transfer could be obtained. Volunteers were called for by means of a letter to every individual on the Deferred List in which emphasis was placed on the Army's urgent need for the highest grade of material. The response was totally inadequate and compulsory transfers of the required numbers then had to be resorted to.

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(1) It was estimated that there were 20,000 officer posts and 8,000 N.C.O. posts in the R.A.F. suitable for tour-expired aircrews. There were deficiencies in some cases and to that extent the position would be relieved.
(2) A.M. File S.99180.
(3) W.M. (44) 90th Conclusions.
(4) At the end of June 1944, there were approximately 32,000 aircrew candidates on deferred service. See Appendix 15.

It was decided to reduce the List to the requisite size in two phases. The first phase, which lasted throughout July and August, consisted of the recall for re-interview by special Selection Boards of some 14,000 recruits. Over 11,000 were rejected by the Boards and were discharged. The names of the eliminees were referred to the Ministry of Labour for direction to the Army or, in case of candidates subject to the Schedule of Reserved Occupations, for retention in industry. Phase II consisted of the recall, at the rate of approximately 1,000 a week, of recruits retained from Phase I and the balance of the Deferred List (with the exception of Irish recruits who were interviewed by a special Board at Belfast and of University Air Squadron cadets who were screened from recall) to an Aircrew Reception Centre for medical examination, aptitude testing and an interview by an Advisory Officer.(1) Only 20 per cent of the recruits recalled for Phase II were retained, the balance being discharged in the same way as the Phase I rejects.(2) Recalls for re-interview were suspended in December 1944, by which date all recruits who had been enlisted prior to 20 November 1944, with the exception of University Short Course and 150 miscellaneous cases, had been recalled, and the Deferred List had been cut by over 23,000 men to a little over 8,500.

Further Measures to Reduce the Surplus

At the same time as the number of prospective aircrew pupils was being drastically cut by means of the reduction of the Deferred List, other measures were being implemented with the purpose of weeding out a greater proportion of the aircrew trainees by raising the pass standard. During the preceding few months, a series of steps has been taken to employ surplus aircrew personnel, both trained and under training, temporarily on ground duties. Thus, surplus personnel under training were being employed as M.T. drivers and despatch riders, on clerical and other ground duties at R.A.F. units and, at the request of other Government Departments, on transport, first aid building repairs and agricultural work. Extensions of courses had also been introduced in all training theatres.(3)

These measures were but palliatives, however, and at an Air Council meeting held late in July 1944,(4) it was suggested that surplus aircrews should be disposed of as and when they were thrown up instead of waiting for a reduction in the flying training organisation, which could, in any case, not produce effective economies for some 15 to 18 months. The Air Member for Personnel stated, however, that real progress in solving the problem awaited decisions on such matters as the Second Phase Target Force in terms of crew and ground establishments by theatres, together with a programme for the contraction of the force to the Second Phase target. It would also be necessary to have a revised programme for the contraction of the flying training organisation. These were not yet available.

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(1) A.M. File S.101920.
(2) Many of these men were of Army officer quality and, consequent upon Air Ministry representations to the War Office, they were looked at specially for this purpose on transfer.
(3) A.C. Paper 42(44).
(4) A.C. Mtg. 7(44).

The extension of aircrew courses, combined with reduced requirements, had resulted in an increase in the surpluses held, at different stages of training and the R.A.F. was compelled, in August 1944, to refuse to enter into training any more cadets even though many of them showed high aptitude and had the makings of better crews than the men who were at that time just able to pass through their training. In order not to lose this high grade material, it was decided to raise the training standards for every aircrew category so that the least proficient would be weeded out to make room for higher quality men in the declining number of training vacancies. For pilots a wastage plus elimination rate of up to 20 per cent in Elementary Flying Training Schools and 20 per cent in Service Flying Training Schools was recommended. The elimination and wastage rate at schools where all categories of navigators and air bombers were trained after I.T.W. was raised from 15 per cent to 22½ per cent in respect of navigator categories and from 5 per cent to 12½ per cent in respect of air bombers.(1)

Until August 1944, the practice had been for training failures overseas to be considered for training in another category in the same country. In order to ensure that a uniform standard should be applied to training failures at home and overseas, it was then decided that all aircrew training failures overseas should be brought to a Central Re-selection Centre in the United Kingdom. In view of the higher selection standards which were being imposed consequent upon reduced aircrew requirements, only about 5 per cent could be accepted for alternative aircrew training. All cadets who did not wish to volunteer for an alternative aircrew category and those cadets who were unsuccessful at the Re-selection Centre were discharged from the R.A.F. and placed at the disposal of the Ministry of Labour and National Service. This ruling did not apply, however, to serving airmen volunteers who were returned for employment in their basic trades nor to ex-A.T.C. cadets who were given the option of being considered for ground service. Seconded Army officers were placed at the disposal of the War Office. Volunteers from overseas were discharged but were eligible for service in the Army or Navy if desirous and suitable.

Further Reductions to meet Phase II Requirements

At the beginning of October 1944, there was still difficulty in giving a clear lead to Departments with regard to requirements for Phase II of the war, although it was anticipated that the R.A.F. target force would be the equivalent of 338 squadrons. When the Air Member for Personnel stated that the need was for detailed information as to theatres, types of squadron, aircraft, etc., he was told that the figures already circulated in the 5th edition of the Target Force for Stage II gave much of the information required and although not final were getting near to stability. Major changes were unlikely.(2)

On this basis, a comparison was made a few weeks later between the strength of aircrew trainees as at

(1) A.M. File S.103175.
(2) A.C. Mtg. 10(44), 3 October.

30 September 1944, and the Phase II pupil requirements.(1) This revealed that there would be a surplus of over 50,000 in 1945.(2) 30 September 1944, was regarded as an 'appropriate date' in relation to the assumption that Germany would be defeated by 31 December 1944, as broadly a three months supply was held in Operational Training Units. As entries to basic training had been suspended since early August 1944, the strength in basic training would be progressively reduced by transfer to post qualification training.

In considering the elimination of surpluses as a whole, a major problem arose as to whether strengths should be reduced to the new establishments throughout the scale or whether temporary surpluses should be retained at certain points in the training pipeline. The retention of a proportion of qualified personnel in excess of Phase II requirements would prevent the resumption of entries to initial training from civil life and would also delay the conversion of the training organisation to its planned Phase II set up. On the other hand, it would be uneconomical to train new personnel whilst personnel already fully trained were available, and there would certainly be severe criticism of such a policy. The retention of qualified personnel in excess of requirements would enable a margin for contingencies to be held at a stage where there would be the least repercussions amongst individuals, particularly on the pay aspect. In view of this, and of various other major factors which might well have appreciable repercussions on the surpluses, the Director General of Manning recommended that, except for any ex-University Air Squadron entries which might be necessary, no attempt should be made to resume entries from civil life(3) and that any preliminary elimination measures should be confined to cadets (i.e. those not yet qualified).

As a surplus existed in all aircrew categories, it was recommended that cadets selected for elimination should not be permitted to remuster to another aircrew category. With certain exceptions,(4) all cadets would have the option of

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(1) A.M. File S.104695.

(2) Details of the anticipated surplus were as follows:-

	Preliminary and Basic Training	Post Qualification training (excluding O.T.U.)	Total (excluding O.T.U.)	O.T.U. and post-O.T.U.
Strength (30.9.44.)	40,250	16,220	56,470	Surplus broadly estimated at 20,000 becoming available in 1945.
Phase II Requirements	20,200	3,220	23,420	
Surplus	20,050 (49% of strength)	13,000 (80% of strength)	33,050 (59% of strength)	

(3) An undertaking had been given to the War Cabinet that there would be no manpower intake into the R.A.F. before the end of June 1945. Outside that undertaking, however, the R.A.F. was recruiting, but not entering into training, some 50 aircrew candidates each week, including a minute trickle from the A.T.C. and would be entering some 490 University Short Course candidates on deferred service, the equivalent of three months' stock. (A.M. File S.104695.)

(4) The exceptions were:-
(a) Cadets ex-basic trades who would automatically revert to such trades.
(b) Seconded Army officers who would return to Army duties.
(c) Allied cadets who formed part of R.A.F. intakes who would be considered individually.
(d) Dominion Air Force personnel who would be reported to the appropriate headquarters for disposal.
(e) Cadets recruited overseas who would have the additional option of discharge and repatriation.
(f) Cadets enlisted following a waiver of the Schedule of Reserved Occupations, whose disposal was the responsibility of the Ministry of Labour and National Service.

transfer to the Army, Navy or Marines or of remustering for R.A.F. ground duties (all trades) for such time as vacancies existed.

It was agreed that a panel should be set up, under the chairmanship of the Director of Flying Training, to recommend the machinery and organisation which would be necessary for classifying aircrews for the purpose of disposing of surpluses at Aircrew Reception Centres, Initial Training Wings and Aircrew Despatch Centres. Subject to the introduction of upper age limits,(1) elimination was to be determined, as far as possible, on the standards attained by cadets, and the best retained. For the purpose of disposal treatment, all, except hopeless failures, who were suspended from training under this guillotine procedure were to be regarded as redundants. It was decided that surplus aircrew trainees should be disposed of at the following stages of training:-

(a) Prior to basic training. The pre-basic school stock was to be reduced to the numbers required for entry into basic training up to 1 June 1945.

(b) After completing basic training but before passing to the next stage. Ex-Basic Schools were to be cut so that on 1 July 1945, there remained three months' stock on German war replacement rates, which was roughly equivalent to six months' stock for Phase II war replacement rates.

It was intended that the guillotine procedure should be applied to aircrews as soon as possible after the Panel had decided what machinery and organisation were required. In the middle of January 1945, however, when the Panel had almost completed its investigation, the Director General of Manning stated that the question of bringing the guillotine procedure into operation had been suspended owing to the uncertainty concerning future requirements and training. Meanwhile, surplus aircrews in the primary stages of training were being employed on clerical and other duties.(2) Early in February, the guillotine procedure was dealt its death blow, when it was stated that the contraction of establishments which it had previously been hoped to achieve by 30 June 1945, could not now materialise owing to the latest assumptions concerning the end of the war with Germany.(3)

A Revised Procedure for dealing with Redundancy and Failures

At a meeting of the Directors General in A.M.P.'s Department in October 1944, it had been emphasised that it was important to distinguish between those cadets who could be regarded as surplus to requirements and those who were training failures. The former were eligible for consideration for ground duties in the R.A.F., while the latter were normally placed at the disposal of the Ministry of Labour and National Service for transfer to the Army.

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(1) Candidates who had attained their 26th birthday were no longer being accepted for aircrews, and it was now agreed that, irrespective of the standard attained, all aircrew trainees who had attained their 31st birthday on 1 January (or 'G' day) should be declared redundant.
(2) A.M. File S.103064.
(3) T.S.942/D.G.M.

By the beginning of 1945, however, it was very doubtful whether this distinction was still justifiable and practicable as the great majority of cadets had been delayed at one or more stages of training and the pass standards had been arbitrarily raised to a very high level.(1) Thus cadets were being suspended for what were, in effect, reasons beyond their control and it was extremely difficult in many cases to draw a clear distinction between the true training failure and the cadet who, but for the current supply and demand position, would not have been suspended from training.

The problem was brought to a head by the arrival at the Re-Selection Centre of a number of cadets suspended from training overseas following the raised standards and a batch of ex-Preliminary Air Crew Training cadets rejected for aircrew after aptitude testing only and who could not, therefore be treated as training failures. Under the existing ruling, the former, if fit Grade I, were transferred to the Army and were normally ineligible for transfer to R.A.F. ground trades unless they had served in the Air Training Corps, whereas the latter could be considered for R.A.F. ground trades. In view of the embarrassment and discontent which the disparity in treatment was likely to cause and the difficulty of providing a satisfactory explanation to the first set of cadets, the Director General of Manning decided, as a matter of urgency, that both sets of cadets should be offered (at the Board's discretion) ground duties in the R.A.F. subject to the reference of Schedule of Reserved Occupations cases to the Ministry of Labour.(2) This decision brought all the cadets into line with cadets ex-A.T.C. who were previously offered transfer to ground duties.

The question of disposing of aircrew training failures by transfer to the Army was further aggravated by the general deficiencies in ground trades and the great difficulty in providing enough fit men for overseas service. The Director General of Manning therefore asked that Re-Selection Boards, while retaining a discretionary power to reject for R.A.F. ground duties any cadet who was clearly unsuitable, should offer ground duties in the R.A.F. to all cadets suspended from training, as an alternative to transfer to the Army.

Requirements during the last months of the German War

Owing to the continuation of the war with Germany into 1945 and the virtual cessation of intakes to aircrew training,(3) the surplus aircrew stocks which had been accumulated in the previous year had been almost completely absorbed by March 1945. It was then stated that ab initio entries to aircrew training would be required at the rate of 1,200 a month

(1) A.M. File S.94097.
(2) The Ministry of Labour wanted to have a say in the disposal of all redundant aircrews, even if they had not been enlisted as a result of the waiver procedure, but the Air Ministry objected most strongly to this and refused to accept the interference as regards men who had come to the R.A.F. as part of their man-power allocation. Finally, the Ministry of Labour agreed to allow, wherever possible, the R.A.F. to retain S.R.O. cases for ground employment if they were required. (Mtg. of D.G.M. with Ministry of Labour - 3 January 1945.)
(3) The Ministry of Labour had agreed on 3 January 1945, that the R.A.F. should continue to send forward to A.C.S.B. all volunteers subject to the following conditions:-
(a) That acceptances were kept down to an average of 40 a week.
(b) That they avoided building up a big peak.
(c) That there was no delay in passing volunteers through A.C.S.B.

from March until the end of June, and at the rate of 1,800 - 1,900 a month thereafter. As the national manpower position would prohibit any allocation of manpower to the R.A.F. in order to meet this new commitment, it was clear that all possible crew intakes would have to come from:-

(a) Serving airmen, particularly from those trades in which there was a surplus.

(b) Relaxed passing out standards.

(c) The allowance of re-sits for examinations.

(d) A further intensive recruiting effort within the Service.

(e) An intake from the Deferred List, but this was unlikely to be possible during the first half of the year.

Training Schools were accordingly informed that it was no longer necessary to maintain the restricted flow from basic training which had been instituted by the raised wastage ceilings and other restrictive measures. They were instructed to plan wastage at the following rates: E.F.T.S., 10 per cent; S.F.T.S., 10 per cent; A.O.S./A.N.S., 15 per cent for Navigator categories and 5 per cent for Air Bombers.(1)

The aircrew position was further eased when the Air Council decided, early in April, to make cuts amounting to 37 squadrons by the end of July 1945 and to close certain Operational Training Units and a Heavy Conversion Unit. The Air Member for Personnel stated that, as the output from basic training was already geared to the Stage II force, intakes into Advanced Flying Units would, in any case, begin to be reduced very soon, with the consequent progressive reduction of Operational Training Units and Heavy Conversion Units thereafter.(2)

Before the full effects of this latest reduction could be felt, the situation was completely changed by the surrender of Germany on 8 May 1945.

The Re-Allocation of Aircrew during Phase II of the War

The contraction and different composition of the R.A.F. that was necessary for the war against Japan automatically made a large number of productive aircrew and aircrew trainees surplus to requirements. As nearly all aircrew were in the later age and service release groups, and were accordingly ineligible for early release, it was necessary for redundant aircrew personnel to be re-allocated to ground duties. In view of the urgent necessity for the provision of ground personnel and for the reduction of aircrew training establishments to the size required for the war against Japan, both productive aircrew and trainees at all stages of training had to be selected for re-allocation.(3)

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(1) A.M. File S.103175.
(2) A.C. Paper 13(45).
(3) A.M. File S.103064.

The problem of re-allocation was a large and complex one. It was estimated in April 1945 that during the contraction to the Phase II target force, approximately 27,000 General Duties officers out of a total strength of 58,000, and 50 airmen aircrews out of a total strength of 100,000 would have to be re-allocated. It was decided that, as far as productive aircrew were concerned, the selection of personnel for diversion to ground duties should be made at Group level. Wherever possible, personnel diverted to ground duties were to be trained and employed in the branch or trade of their choice.

So far as productive aircrew were concerned, the following classes were generally declared redundant:-

Class I - Aircrew who had completed a second operational tour unless they had been selected by the Air Ministry or by Commands for non-operational flying or general duties employment.

Class II - Aircrew who had completed a first operational tour who:-

(a) Had not been pre-selected for a second tour as squadron or flight commanders, or for other key appointments.

(b) Were not required for posting to Heavy Conversion Units or Operational Training Units as instructors, to Transport Command, to flying instructor posts in the basic training sphere or for training as such, or to other general duties employment by the Air Ministry or Commands.

Class III - Members of 'broken up' or headless crews, unless selected for re-crewing by the Air Ministry of Commands.

Class IV - Aircrew with limited flying (medical) categories.

Class V - Aircrew who were already surplus to establishments or were in units due for dis-establishment in the Japanese war, unless required for further flying or general duties employment as at I, II, or III above.

So far as aircrew under training were concerned, the selection of qualified personnel at the Heavy Conversion Unit, Operational Training Unit and Advanced Flying Unit stages was made by Command Headquarters, who took into account the following considerations:-

(a) Ability in aircrew duties as reported by the unit commander and in training records.

(b) Qualities of leadership.

(c) Proneness to accident.

(d) Previous trade or administrative training in service or civil life which would make a trainee suitable for employment on ground duties.

(e) Preference for ground or flying duties.

Qualified aircrew trainees who were at the Personnel Reception Centre stage, and unqualified trainees, were to be selected on the basis of a review of the training reports of each individual.

It was decided early in June 1945, in view of the difficulty which the R.A.F. was experiencing in finding enough fit men for overseas service, to discontinue the practice of giving aircrew training failures who passed through the Re-Selection Centre the option of being released for service with the Army.(1) In future, all suspended aircrew personnel, including 'waverer' cases, whether they had a basic trade or not, were to be retained in the R.A.F. and remustered in appropriate ground trades.(2) The only exceptions, whose cases were specially considered by the Air Ministry, were:-

(a) Airmen who claimed discharge under the terms of their engagement.

(b) Airmen enlisted under a waiver of the Schedule of Reserved Occupations.

(c) Volunteers for skilled Naval trades.

(d) Ex-University Air Squadron personnel who volunteered for transfer to the Army.

Before much progress could be made with the re-allocation of all redundant aircrew and training failures to ground duties, all plans were overtaken by events, when on 15 August 1945, the war against Japan came to an end.

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Despite the fact that the Royal Air Force entered the war in September 1939, with no experience of air warfare under

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(1) A.M. File S.103175.
(2) From June 1943 onwards, qualified aircrew who were classified as lacking in moral fibre (waverers) and who had enlisted direct for aircrew training, were transferred to the Army for combatant duties. (A.M. File S.61141). Disposal by transfer to the Army had been extended in January 1944 to 'waverers' who had been serving in a Royal Air Force trade at the time of their selection for aircrew training. (A.M. File A.562465/43).

modern conditions on which to base estimates of the numbers of men who could be relied upon to volunteer for aircrew duties and of the allowance which would have to be made for casualties and other wastage, the supply of aircrew candidates of the right or acceptable calibre never failed throughout the whole war. At first, there was little difficulty in securing enough volunteers, despite the high medical and educational standards which were enforced at the beginning of the war, but as early as the summer of 1940 it became necessary to take steps both to increase the number of men volunteering and to raise to at least the minimum standard acceptable for aircrew, the educational and medical standards of youths who were likely to volunteer for flying duties in the R.A.F. Even when the required number of suitable volunteers had been attested, however, there remained the problem of accommodating them and employing them until training facilities were available, and of determining the aircrew category for which each man showed the most aptitude and in which he could best meet the anticipated needs of the Service. Each of these problems was tackled and solved as it arose and, in some cases, had to be tackled anew when changed conditions made the previous solution no longer practicable.

From the first, the Royal Air Force learned many lessons concerning the supply and selection of aircrews upon which the following factors had a profound influence:-

The Deferred List

The problem of holding, and using the services, of aircrew recruits until they could be absorbed into training was met within a few weeks of the outbreak of the war with the institution of the Deferred List. Although its original purpose was to accommodate the initial rush of volunteers, the deferred list found its fuller justification when men began to come forward under the terms of the National Service (Armed Forces) Act. The Army, as the largest users of manpower, set the pace for successive registrations and, if the R.A.F. had not found this means of enlisting volunteers from the younger age groups as they registered for military service, it would have been impossible to have met the later, very large requirements for high quality men for aircrew duties.

As the manpower stringency increased, there was a great deal of criticism of the deferred list which was, however, an indispensable feature of aircrew recruiting under conditions of total war, as it ensured the existence of a reserve of suitable young men who could be speedily absorbed into training as and when they were required. It was particularly valuable when recruits were required quickly to meet a sudden and unpredicted rise in requirements. Moreover, the deferred list made possible the observance of a cardinal principle of wartime manning policy - that men must not be withdrawn from their civilian occupations and be taken into the Armed Forces until it was reasonably certain that the equipment and machines which they were to use on the completion of their training would be available.

The Waiver of the Schedule of Reserved Occupations

The pre-war plans for the expansion of the R.A.F. in wartime proved to be on far too small a scale, and no detailed investigations had been made in peacetime to discover the number of aircrew recruits who might be required on various

hypotheses and the field from which they might be provided. It became evident soon after the outbreak of war, however, that the restrictions imposed by the Schedule of Reserved Occupations were preventing thousands of much needed would-be volunteers from offering their services. The removal of these restrictions in response to the urgent representations of the Manning staff to the interdepartmental committee concerned resulted in an additional 60,000 aircrew recruits being secured during the remaining years of the war. The fact that no similar relaxation of the Schedule was granted to any other category of personnel in the Armed Forces (except certain submarine ratings) throughout the war is impressive evidence of the force of the arguments that were produced in favour of the relaxation of the Schedule in respect of aircrew volunteers.

Publicity

The need for extensive aircrew recruiting publicity was not at first fully realised, but it later became clear that, so long as only volunteers in the strictest sense of the word were employed on flying duties, the strongest publicity would be required in order to overcome unfavourable influences. Nothing was known at first as to the extent to which volunteers would be forthcoming in a war in which service with the Armed Forces was largely controlled by the operation of the National Service Act. Notwithstanding the many merits of this Act, it had an impersonal, uninspiring quality which tended to discourage all wartime enthusiasms and, as results showed, the percentage of acceptable aircrew of registerable age was decidedly low.(1) It would have been still lower had it not been for the considerable amount of propaganda which was directed towards overcoming the restraining influence of family considerations and towards rousing and maintaining at the highest level the interests of the younger conscripts in the adventure and importance of aircrew duties.

It was not, however, only to ensure an ample supply of real volunteers of outstanding qualities that aircrew publicity had to be employed. Throughout the war, there were delays at different stages of training and volunteers spent an inordinately long period on the waiting list. Much discontent among the candidates was caused by this, and the public became critical. In the interests of the recruits' morale and of future aircrew recruiting, propaganda had to be directed towards explaining these delays to the individuals concerned and to the nation at large without disclosing information to the enemy. Later in the war it became necessary to explain to those candidates who had been on deferred service for a considerable time why they were being denied the opportunity of aircrew training and were being transferred to the Army instead.

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(1) Between 21 October 1939 and 9 June 1945, 8,044,697 men registered under the National Service Acts. Of these, 403,322 (approximately 5 per cent) volunteered for aircrew in the R.A.F. Experience up to the autumn of 1943 showed that approximately 37.4 per cent of volunteers were finally accepted for aircrew training.

Pre-entry Training

The need for pre-entry and preliminary training for potential aircrews from all sections of the community was recognised early in the war. By the summer of 1940, the aircrew medical and educational standard had been reduced to a minimum, but it was clear that, even with these standards, vigorous steps would have to be taken to raise the standards of potential aircrew if the required numbers of acceptable recruits were to be found.

Arrangements were accordingly made with Local Education Authorities to give part-time instruction to certain recruits on deferred service. These arrangements eventually gave way to a far more comprehensive scheme for full time education of deferred aircrew recruits. Meanwhile, however, the Air Training Corps had been founded and was providing physical training and instruction in Service subjects as well as general education. Its value can be seen in a comparison between the overall percentage of acceptances for aircrew training and the percentage of acceptances for ex-A.T.C. cadets.(1) There was also a need to increase the numbers of aircrew volunteers of officer quality and the University Air Squadrons were revived and new ones started. In 1941 a scheme was introduced for giving selected aircrew candidates a six months University course as it was felt that the broadening effect of University life would fit many of them for commissions on the completion of their training.(2)

The problem of maintaining a flow of aircrew of the required categories throughout the war was an extremely difficult one, especially as cadets had, on an average, to enter the training machine, in a pre-selected category, some eighteen months before they would become available for operations. The forecasting of requirements so far ahead was made more difficult by unforeseeable factors such as variations in the rate of aircraft production, changes in the types of aircraft and in the rate and extent of R.A.F. expansion. These and many other circumstances created surpluses and deficiencies within the training organisation which at times gave rise to serious disquiet and criticism. The long delays in training, and the long pre-selected category training were, of course, greater irritants to the high quality entrants than they would have been to those of lesser merit, consequently, the criticisms and protests were greater. Nevertheless, it is true to say that, generally, these difficulties were overcome and aircrew of the right quality and in the right numbers were provided at the right time to meet operational requirements.

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(1) The percentages of aircrew volunteers accepted by Selection Boards were as follows:-

	Overall (including A.T.C.)	A.T.C.
1943	52.2	66
1944	43.9	54.8
1945	12.7	20.8

(2) For further details of pre-entry training see Chapter 11.

Pre-entry Training

The need for providing pre-preliminary training for potential entrants from all sections of the community was recognised early in the war. By the summer of 1940, the Ministry medical and educational authorities had been reduced to a minimum, but it was clear that, even with this diminished vigorous action would have to be taken to raise the numbers of potential officers if the requisite number of competent recruits were to be found.

Arrangements were accordingly made with local Education Authorities to give pre-entry instruction to candidates on deferred service. These arrangements eventually gave way to a far more comprehensive scheme for all ranks above the age of deferred service entrants. Generally, however, the Air Training Corps had been founded and was providing physical training and instruction in Service subjects. It was a popular adventure. The value can be seen in many ways. Not only did it provide a useful preventive of boredom for adolescents, and the opportunity of competitions for cadets.(1) There was also a good to increase the numbers of adequately trained of officer quality and the training of the Commission more a vivid and near reality. In fact a pilot was introduced for training aviation minded youths as a commonwealth University worked as it did, that the considerable influence of University life would be many of the pre-commissioned on the actual job of flight training.(2)

The problem of maintaining a flow of officers of the requisite or proportion thereof, for the war was an extremely difficult one, particularly as cadets had, on an average, to enter the training machine, in a pre-selected category, some eighteen months before they could become available for operations. The forecasting of requirements so far ahead was made more difficult by unforeseeable factors such as variations in the rate of aircraft production, changes in the type of aircraft and in the rate and extent of R.A.F. operations. There and many other interdependent factors, conferences and informations within the training organisation which at times gave rise to serious disquiet and criticism. The long delays in training, and the long pre-selected category waiting were, of course, greatly furthered by the high quality intake than they would have been in times of lower equit, consequently, the artificial and pre-selected waiters. Nevertheless, it is true to say that, generally, local difficulties were overcome and recovery of the right quality and in the right numbers was eventually in the right time to meet operational requirements.

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(1) The percentages of aircrew candidates accepted by Selection Boards were as follows:

	Overall (including R.A.F.)	R.A.F.
1941	10%	50
1942	8.5	4.5
1943	12.7	20.3

(2) For further details of pre-entry training see Chapter 14.

CHAPTER 8

TRADESMEN

There was an abundance of volunteers for the Services immediately after the outbreak of war, and the Royal Air Force enlisted large numbers of men, both skilled and otherwise, in order to secure a lien on their services. As a result of these enlistments and of the recall of many thousands of reservists, dilution in the fitter trades was considerably reduced, but as every regular reservist had been regarded as competent to carry out his duties irrespective of the time which had elapsed since he had left the Service, the actual strength of skilled men was considerably less than the figures implied. The Air Member for Personnel reported that the shortage of skilled men was most acute in the instrument trades, which would have to be split and opened to women.

Before beginning to train war entrants in appreciable numbers, the R.A.F. had to dispose of certain other categories of ground airmen who, it had been agreed, would be given priority for training vacancies. These were regular airmen in units awaiting training vacancies, technical recruits in depots and untrained pre-war R.A.F.V.R. airmen. These three classes totalled 15,600 airmen but, although it was estimated that they would fill all training vacancies until December 1939, it was decided that all volunteers for ground duties should be enlisted as they presented themselves. The ensuing congestion was eased at the end of September 1939 by the setting up of the deferred list.

Among the first measures which the Air Council took after the outbreak of war with a view to improving the supply of tradesmen was to divert training facilities, used hitherto for aircraft apprentices, to the training of older, skilled men who could more rapidly meet the immediate needs of war. In order to make this change-over possible, the Air Council decided in October 1939, to reduce the annual entry of aircraft apprentices from 2,470 for a two years' course to 500 for a three years' course.(1)

Among other measures which were taken to meet the greatly increased demand for quickly but adequately trained personnel was the increase of training facilities which was effected by building new schools and enlarging existing ones, by arranging with manufacturers and contractors to operate schools, by using the facilities of the Board of Education and of the Ministry of Labour and by training at units where practicable. Courses of instruction were shortened by increasing the daily working hours, cutting out items not strictly applicable to the war requirement of the trade and by reducing the time spent on purely educational subjects, domestic routine, organised games, etc. Orders were issued to all training establishments directing them to check the skill of each trainee and accelerate his training according to his skill and energy. In order not to impede the flow of trained personnel into the higher trade groups, the Central Trade Test Board, which could not be adequetely expanded at short notice, was temporarily disbanded on the outbreak of war and its place was taken by

(1) E.P.M. 187.

local boards set up at the schools. The C.T.T.B. was later reformed in greater strength and ensured that uniformity of standard was maintained throughout the Service.(1)

The Release of R.A.F. Tradesmen to Industry

The most urgent need in January 1939, had been to obtain additional recruits for the regular and reserve Forces, and the Schedule of Reserved Occupations which had then been introduced was of a far narrower scope than the wartime Schedule which superseded it in September 1939, and which was designed to ensure the retention in industry of as many skilled men as possible. The result had been that many men had been permitted to join the Reserve and Auxiliary Forces in the first eight months of 1939 who would have been prevented from doing so if the Schedule then in force had been of the same scope as that introduced on the outbreak of war. Immediately after the outbreak of war employers began to press the Air Ministry to release these reservists, and considerable numbers were returned to industry. The Air Ministry was so dependent upon industry, especially the aircraft industry, that properly substantiated applications for release were granted wherever possible.

The possibility of disposing of a number of tradesmen, many of them Class 'E' reservists, who were surplus to immediate R.A.F. requirements was considered in October 1939. The trade groups of Metal Worker and Carpenter each had a surplus of over 800 men, and there was a total surplus in all trades of more than 2,800 men. Several hundreds of these men were offered to the War Office on loan, but only 132 carpenters were accepted. Maintenance Command was offered airmen above its establishment, but could only take six. It was decided eventually to offer the men temporary release to civilian life and, by the end of the year, 175 tradesmen had been released.(2)

The First R.A.F. Demand for Tradesmen

It was not until late in October 1939, some seven weeks after the outbreak of war, that the Director of Manning was able to give the Ministry of Labour and National Service a detailed demand for tradesmen for the remainder of the year and for the first three months of 1940. The total demand for this period was approximately 28,000,(3) and the demand for the whole of the first year of war was 79,715, including 22,000 skilled men.

In putting forward his demands to the Ministry of Labour and National Service, the Director of Manning found that no

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(1) Report of Technical Training Progress September 1939 to March 1945.
(2) A.M. File A.43816/50.
(3) This total was made up as follows:-

	Until 31.12.39	1.1.40 to 31.3.40	Total
Skilled	3,976	5,520	9,496
Semi-skilled	6,087	4,475	10,562
Unskilled but suitable	2,767	5,200	7,967
	12,830	15,195	28,025

(A.M. File S.55208)

common standard of skill or even of description had been devised between Service and civilian trades. Many men who were recorded as technicians under the Schedule of Reserved Occupations were, in fact, nothing more than workers on a production belt. Men described as radio engineers were frequently found to be only distributive agents. The nomenclature of Service trades was not understood by the Ministry of Labour. Although an enquiry into the potentialities of the engineering and allied trades had recently been made, no comprehensive trade census had been taken, and it was only by a process of trial and error that the capacity of industry was finally determined and the machinery for supplying tradesmen to the Services perfected. Men who were employed at the time of their registration for national service in certain highly skilled trades which were in great demand by the Services were only allowed to be enlisted for service in the Service trade which was the nearest equivalent to their civilian trade. These skilled civilian trades were known as 'unasterisked' trades. Men in other civilian trades, known as 'asterisked' trades, could be enlisted for general service. Considerable difficulty was caused by the fact that many of the men who were regarded as skilled in their civilian trade did not possess the degree of skill required for their corresponding Service trade. In the early days of the war, no account was taken, when a man registered, of his past industrial experience or of his hobbies, only his current occupation being recorded, irrespective of the fact that he might only have been employed in it for a short while. As a result, many potentially useful tradesmen were passed over on registration and were not discovered until they were combed out in the Service.

The manpower demand for the fitter trades for the first three years of war was estimated in October 1939, at 38,400 skilled men and 30,800 semi-skilled men. The skilled personnel were those required for conversion to Fitters II and the semi-skilled men were those required for Flight Mechanics and Riggers. These estimates of requirements were made as the first approach to the problem of the recruitment of skilled and semi-skilled youths from industry. It was realised that the rigging in the Fitter group had no appreciable field of recruitment of skilled and semi-skilled youths from industry but it was considered, nevertheless, that the basically trained engineer fitter provided the best material for conversion to airframe needs. The demand for an average of 13,000 skilled fitters annually for three years was regarded as more than industry would be able to bear and it was considered, moreover, that the experienced flight mechanic and rigger would provide good material for conversion to the Group I trade of Fitter II, although they would probably need a slightly longer training course than the skilled fitter from civil life. In these circumstances, it was proposed to assume that the demand for skilled men should be met in equal proportions from skilled fitters from civil life and from the conversion of flight mechanics and riggers after one year's practical experience in units. The effect of this decision was to decrease the demand for skilled fitters from civil life but to increase the demand from semi-skilled fitters to the extent that it was necessary to replace flight mechanics and riggers withdrawn for conversion to Fitters II. The demand for fitters from civil life during the first three years of war thus became 18,900 skilled men and 50,000 semi-skilled men.(1)

(1) A.M. File S.55208.

Developments During 1940

The Air Member for Personnel reviewed in January 1940, the policy which the R.A.F. was following in order to ensure that its skilled personnel were employed to the best advantage of the Service and of the nation. He said that all men who were surplus to immediate requirements were being invited to accept employment in industry until the Air Force needed them. Balloon Command was being combed with a view to releasing from non-technical employment men with technical qualifications, many of whom had joined the balloon barrage organisation through the Auxiliary Air Force during the last years of peace. Manpower was being saved by the substitution, wherever possible, of members of the Women's Auxiliary Air Force, but the difficulties of providing housing and training accommodation for women at R.A.F. stations made this a slow process. The Royal Air Force was not counting upon being able to draw a large proportion of its skilled men from industry and was already following the policy, advocated by an Inter-Departmental Conference on Labour Requirements,(1) of relying upon the conversion of the semi-skilled to the highest skilled tradesmen and of replacing the semi-skilled tradesmen by personnel trained in the Royal Air Force.

The Simplification of R.A.F. Skilled Trades

In order that recruits from civilian trades could take their place in units with the minimum of further training, some of the more highly skilled Service trades were broken down into their component parts, thus enabling the periods spent under instruction to be shortened and the field of selection of trainees to be widened. In addition, the syllabi of all trades were simplified so that trainees were taught only the minimum amount required to enable them to carry out their daily duties.

Typical examples of these split trades were Machine Tool Setter and Operator (which was sub-divided into Turner, Miller, Grinder), and Metal Worker (which was sub-divided into Blacksmith and Welder, Coppersmith, Sheet Metal Worker). The most outstanding example of a split trade was to be found in the Electrical and Wireless trades group. The Radio Mechanic was introduced into the Service in February 1940, as the result of the trade of Wireless and Electrical Mechanic being divided into two. The radio mechanic specialised on either ground or air-borne equipment, the radio mechanic (air) coming to specialise still further in 1943 on the apparatus used by either Fighter, Bomber or Coastal Command. Altogether, the number of R.A.F. trades, including those introduced especially for the Women's Auxiliary Air Force, increased from less than 50 on the outbreak of war to more than 190 by the middle of 1944.

The over-simplification of trades was a rapid method of filling unit vacancies in the absence of time and facilities for more general training. It was not, however, a true economy of effort or of personnel as it necessitated more supervision for inadequately trained personnel and increased the requirements of domestic accommodation. During the early

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(1) See Appendix 11 for a list of R.A.F. trades on the outbreak of war.

stages of the war, there was a shortage of skill rather than of men, but with the better training facilities which were gradually built up and the increasingly serious shortage of men, the process of breaking down trades into their component parts began to be reversed in 1942. From then onwards, it was the recognised policy to give more airmen further training in elementary trades so that one man, fully trained, could cope with the work formerly undertaken by two or more men of elementary trades.(1)

Changes in Aircraft Apprentice Training

The possibility of stopping aircraft apprentice training for the duration of the emergency was discussed in July 1940. Technical Training Command pressed for the total abolition of apprentice training for the period of the war and for the discharge to their homes of apprentices under 17 years of age. They asked for these steps to be taken on the grounds that apprentice training facilities in the form of instructors, equipment and accommodation, all of which were in short supply, could be diverted to the training of adult airmen on shortened war courses who could contribute to the immediate war effort. It was estimated that facilities which were required in order to produce 1,000 apprentice trained fitters in three years could, in the same length of time, produce about 11,000 flight mechanics.(2)

There were, however, very weighty arguments against adopting Technical Training Commands' proposal. Not only would it expose the Air Ministry to a charge of breaking faith with the boys, their parents and the educational authorities, but it would seriously prejudice the post-war efficiency of the Royal Air Force particularly as it was from the first class material provided by the ex-aircraft apprentices that a nucleus of N.C.O., W.O. and C.W.O. posts would be manned. The apprentices had attested for a period of twelve year's regular service from the age of 18 and were disciplined Service personnel who, although immature in age, were superior in basic technical usefulness to most of the adult wartime entrants.

It was clear that if the aircraft apprentice training scheme were stopped, it would be difficult to restart. It was, therefore, decided to retain apprentices already under training, whatever their age, but to restrict their course to two years on the understanding that they would be given further advanced training after the war. The population at Halton was to be reduced to 1,000, and that at Cranwell to 300 apprentices. Sufficient new entries were to be accepted to keep the population at that level as apprentice trained airmen would be invaluable to the post-war Air Force and would provide a source of highly skilled tradesmen for a long war at a time when other sources of supply might be exhausted.

A Smaller Proportion of Skilled Fitters demanded from Industry

Owing to the operation of the Schedule of Reserved Occupations, the entry of skilled fitters from civil life during the first year of the war was no more than a trickle, less than

(1) Note on J.W.P.S. 50.
(2) A.M. File A.37864/39.

2,000 having been obtained by the end of August 1940. Further consideration was then given to the question of the minimum demand which the Royal Air Force should make upon the Ministry of Labour and National Service for skilled fitters in order to ensure that a reasonable amount of skill and experience was available for the Air Force. Apart from the shorter period of training which was required to produce a Group I fitter from this source than by the conversion of flight mechanics, two important considerations had a bearing upon the question. These were:-

(a) The practical experience, possibly with an apprenticeship basis, which the skilled civilian entrant brought with him and which was practically lacking in the entrant who required training first as a flight mechanic. This experience was of considerable value in the matter of Service maintenance.

(b) The value of this experience when considered in relation to the supervision of airmen. This was a most vital consideration having regard to the future manning of the N.C.O. ranks.

For these reasons, therefore, it was considered essential that the entry of airmen to the highly skilled fitter trades should have a fair leavening of skilled entrants from civil life. In view of the fact that 55 per cent of the total fitter group requirements were N.C.O.s, it was regarded as reasonable that the supply of skilled fitters should be in this proportion also, the balance of 45 per cent being met by the conversion of flight mechanics and riggers. The existing training organisation was capable of producing approximately 40,000 Group I fitters annually, including both direct entrants for fitter duties and converted flight mechanics and riggers. On that basis, the R.A.F. required ideally an entry of 24,000 skilled fitters from civil life during the following twelve months.

It was felt, however, that a demand of that dimension would be far in excess of what industry could bear and there would be no hope of its favourable consideration by the Ministry of Labour. Nevertheless, it was essential that the Royal Air Force should present a demand which could be regarded as a reasonable minimum and it was decided that 20 per cent of requirements should be met from the direct entry of skilled fitters instead of the ideal 55 per cent. (1)

A Growing Shortage of Skilled Tradesmen

In view of the shortage of skilled tradesmen, which was already becoming apparent, and the necessity for using skilled men to the best advantage, the Air Council asked Air Chief Marshal Brooke-Popham, in August 1940, to undertake an independent investigation into Royal Air Force establishments. His report, which was issued a month later, gave an overall picture of the situation. He had found that the standard of tradesmen's experience, if not of their skill, was lower than it had been a year previously. The airmen were keen but required more supervision than hitherto so that more work devolved upon the higher ranks, any shortage of whom was thus

(1) A.M. File S.58432.

felt with double severity. The Group I trades were generally below establishment so that, for example, armourers were having to do the work of fitter armourers and W/T operators that of wireless and electrical mechanics. With very few exceptions, establishments were found to be well adjusted to the work which had to be done.(1)

The Manpower Requirements Committee was informed in October 1940, that the Royal Air Force demand for 286,500 men for ground duties during the period from September 1940 to December 1941, included a minimum of 55,760 skilled tradesmen.(2) The fitter trades would require 56,000 men during the period in question. The Director of Manning stated that the R.A.F. itself would produce most of these men by conversion training within the Service, but that the small proportion of men taken direct from industry would have to be fully skilled tradesmen who were capable of supervising repair work and of training other airmen.(3) Owing to the growing requirements of industry and to the operation of the Schedule of Reserved Occupations, the supply of skilled tradesmen from industry had never reached the desired level and was still declining, so that the R.A.F. was already having to produce the vast majority of its skilled tradesmen by training within the Service.(4)

Further Measures to Improve the Supply of Skilled Tradesmen and to Ensure their Economical Use

The provision of enough skilled tradesmen was a problem with which the Manning staff were faced almost throughout the war. The supply of adequate numbers of radio mechanics of the right quality was one of the most difficult and persistent aspects of the problem, the solution of which called for strong measures quite early in the war. There were several reasons for this difficulty in filling radio mechanic establishments in particular. These included the facts that requirements were constantly increasing owing to the growing complexity of radar equipment, that a relatively high standard of education was essential in a radio mechanic and that, for security reasons, the propaganda value of the trade had to be much restricted. It had been hoped, when the trade was introduced in the spring of 1940, that a large proportion of requirements would be met by the enlistment of skilled radio engineers, but, by the early autumn of that year, the civilian radio trade had been combed almost to exhaustion(5) and other methods of finding enough men

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(1) A.M. File S.64420.
(2) A.M. File S.55208.
(3) M.P.R.(S) (40) 2nd Mtg.
(4) The small proportion of recruits who were fully skilled tradesmen can be seen from these recruiting figures for the period from 3 September 1939 to 1 February 1941:-

	Total Recruits	Skilled Recruits
Fitter Group	81,245	2,367
M.T. Group	3,087	896
Instrument Group	6,679	660
Armament Group	7,069	260
Electrical Group	9,395	1,556
Wireless and Radio Group	4,339	3,990
	111,814	9,729

(5) A.M. File S.87799.

had to be investigated. The first step was to discover how many radio personnel already called up to the R.A.F. were employed on work other than radio. The Services had no means of doing this rapidly, and the Radio Manufacturers Association agreed to ask retail, wholesale and manufacturing radio firms for the names and whereabouts of all their former employees who were in the Armed Forces. As a result of this action, enough trained electricians were remustered in the Air Force in the autumn of 1940 to meet immediate requirements.

Although the immediate supply of radio mechanics was thus safeguarded it was clear that, in order to meet future requirements, ab initio radio training would have to be given to large numbers of unskilled men. The Royal Air Force was, however, quite unable to provide such training in the autumn of 1940, having already had to increase the population and cut down the length of radio courses.(1) The Wireless Personnel Joint Sub-Committee(2) suggested, therefore, that this ab initio training should be undertaken by the Board of Education at Technical Colleges and Schools. This was agreed, and courses in basic wireless opened in February 1941, at eight colleges. Trainees who obtained 60 per cent or more in the examination at the end of the course were creamed off for a radio mechanic course, while those who obtained less than 60 per cent were sent on a wireless course.

A further improvement in the radio mechanic position resulted from an agreement which was reached with Canada early in 1941 under which Canada agreed to supply the Royal Air Force with 5,000 semi-trained radio mechanics. The first of these arrived in the United Kingdom in the spring of 1941 and further batches arrived at intervals until the commitment was completed in the spring of 1944. By September 1944, Canadian personnel made up one third of the total radar mechanic strength of the R.A.F.(3) New Zealand also provided the R.A.F. with a small number of radar mechanics.

Although this agreement with Canada was of undoubted value in providing much-needed tradesmen, it led to grave difficulties and to Canadian dissatisfaction. The Air Ministry demanded high educational qualifications in radio mechanics, but the airmen often complained that their employment on the completion of training was unworthy of their educational achievements and of their training. Moreover, the commissioning rate was very low by Canadian standards and there were frequent complaints by the Canadian authorities about this and about the alleged mis-employment of the mechanics.

A Waiver of the Schedule of Reserved Occupations for Certain Skilled Tradesmen

On the basis of the arrangements which were in force at the beginning of 1941 for the reservation of skilled men in

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(1) A.M. File C.S. 14825.
(2) The Wireless Personnel Joint Sub-Committee was formed in January 1941, following a War Cabinet instruction to Lord Hankey in the previous December to report on the supply of technical wireless personnel for the Services and to co-ordinate their requirements.
(3) A.M. File C.S. 9742.

industry, the number of qualified men who would become available for call up to a number of the most important Service trades would fall far short of the estimated demand for 1941.(1) When the plan to differentiate between protected and unprotected work came into operation,(2) it would be possible to provide Service tradesmen from among men employed on unprotected work, but little help could be expected from that direction until the summer of 1941. Moreover, even when men could be obtained from unprotected establishments, they would be far below the numbers necessary.

Meanwhile, with a view to obtaining the men required, with the minimum of interference to industry, it was proposed by the Sub-Committee on the Schedule of Reserve Occupations that the following steps should be taken immediately:-(3)

(a) Voluntary recruitment for certain Service trades (in the case of the R.A.F. these were Fitter II, Fitter Marine, Fitter M.T., M.T. Mechanic, Instrument Repairer II and Motor Boat Crew) should forthwith be permitted, irrespective of age, from appropriate civil occupations. Such recruitment would be permitted without question in cases where the employer assented. In other cases, it would be subject to veto by an appropriate sub-committee of the S.R.O. Sub-Committee. Voluntary recruitment would cease when men were forthcoming under the scheme for protected work.

(b) Young men aged 20, who were employed in those occupations for which the age of reservation was 21 or over, should be made available for call up as Service tradesmen irrespective of their existing protection under any form of deferment.

The Man Power Committee agreed to these proposals on 20 February 1941.(4) Voluntary recruitment under this scheme remained open until the end of June 1941. So far as the Royal Air Force was concerned, the response was small.(5)

The Air Ministry informed the Ministry of Labour and National Service in May 1941, that, with the increasing production of Stirling, Manchester, Boeing, Liberator and Catalina aircraft, the supply of highly skilled and experienced electricians who were provided mainly by the conversion of Group II electricians to Group I electricians, would not meet the demand.(6) The need to supplement this source of supply

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(1) So far as the R.A.F. was concerned, the trades in question and the demand for each in 1941 were as follows:-

Fitter	8,750
M.T. Mechanic	1,000
Instrument Repairer I	500
Motor Boat Crew	600

(2) For details of the scheme for protected and unprotected work, see Chapter 4.
(3) N.S. (M.P.P.) (41), 18 - 18 February 1941.
(4) N.S. (M.P.P.) (41) 23.
(5) A.M. File A.193362/41.
(6) The Royal Air Force needed 100 electricians immediately and 1,500 within the current year.

by the recruitment of skilled electricians from civil life had become a matter of vital importance and urgency for the R.A.F.(1) It was, therefore, proposed to the Manpower Committee that:-

(a) For a period of four weeks, the voluntary enlistment in the Royal Air Force of suitable men from appropriate civil occupations should be permitted subject to the employer's consent or, failing such consent, to a decision by the chairman of the Manpower Committee upon whether the enlistment should be permitted:

(b) If the required number of men were not obtained by means of voluntary enlistment within four weeks, the Ministry of Labour and National Service should, as a matter of urgency, call up from among young men whose call up was deferred, a number sufficient to produce one hundred men in all.

The Manpower Committee agreed to these proposals on 14 May 1941.(2)

In the meantime, it had been suggested at an Air Council meeting held in February 1941, that insufficient use was being made of the latent skill to be found within the lower trade groups of the Royal Air Force.(3) In answering this criticism, the Air Member for Personnel stated that aircraft-hands were being selected for trade training within the limits of requirements and recommendations, some 10,000 recommended airmen having been put under training in various technical trades during the previous four months.(4) All airmen who were able to pass the Trade Test Board for remustering to a higher trade group without training were remustered. An average of 250 aircrafthands a month were being mustered to trades, qualifying by their own efforts; the figure was steadily rising. The Air Member for Personnel said that the manpower situation was such that it had become necessary to limit the extent to which airmen of grade I medical category could be employed on duties which did not require such a high medical category or which could be effectively performed by women. He also referred to the possibility of finding skilled men in Balloon Command. He said that there had been a comb out of balloon personnel with that object but difficulty had been met in persuading the men to remuster as, in many cases, remustering would have entailed loss of pay or N.C.O. rank, or posting to another Command. An obstacle in the way of remustering balloon personnel to trades which involved posting was the non-postability of the Auxiliary Air Force airmen who had enlisted before April 1939.(5)

Skilled Men Relieved of Non-technical Duties

The measures, outlined by the Air Member for Personnel, and which were already in operation by the beginning of 1941,

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(1) N.S. (M.P.P.) (41), 5 May 1941.
(2) N.S. (M.P.P.) (41) 7th Meeting.
(3) Air Council Meeting 3 (41), 4 February 1941.
(4) A.C. Paper 15(41).
(5) It was not until April 1943, that the problem of the non-postability of A.A.F. airmen was solved. (A.M. File A.27250/39).

for ensuring the best use of skilled Service tradesmen, were supplemented by others during the first half of that year. Unforeseen circumstances had sometimes necessitated an airman, enlisted as a skilled tradesman for training in a trade, being posted to a unit on the completion of his disciplinary training pending his absorption into a vacancy at a technical training school. Commanding Officers were asked, in March 1941, to ensure that such airmen were employed on duties related to their trade and not as aircrafthands.(1) A month later, in April, Commanding Officers were asked to report the fact when circumstances of a temporary nature, such as the destruction of workshops by enemy action, prevented the proper employment of skilled personnel who were, thenceforth, to be employed elsewhere until they could usefully be re-absorbed in their own unit.(2) It was directed in June 1941, that skilled tradesmen were to be relieved, as far as possible, of guards, working parties or similar duties, in order that they might be employed to the maximum extent on the technical duties of their trade.(3)

Assistance in the efforts to ensure that skilled airmen were employed solely on skilled work came in June 1941, from the Institutes of Mechanical and Electrical Engineering. They co-operated with the Ministry of Labour and National Service and with the Service Departments, to ascertain the current employment of holders of the Higher National Certificate or a diploma in mechanical or electrical engineering who had gained one of these awards during or after 1939. A questionnaire was sent by the Ministry of Labour to each individual recorded in the books of the Institutes, and the completed forms were then forwarded to the Services so that any necessary remusterings might be made and suitable personnel selected for commissioned rank.(4)

The Committee on Skilled Men in the Services

The shortage of manpower which was being felt in 1941 made it increasingly difficult to decide as to the relative merits of the conflicting claims of the Services and industry, and the Minister of Labour and National Service accordingly decided that, before calling up any more men to the Armed Forces, it was essential to enquire closely into the use which the Services were making of the skilled men whom they already had. He therefore appointed a committee at the beginning of June 1941, under the chairmanship of Sir William Beveridge, to investigate the question.(5) The committee were instructed to report:-

(a) Whether the skilled manpower already at the disposal of the Services was being used with due economy and effort.

(b) Whether the Service arrangements for training skilled men were such as to meet, to the greatest practicable extent, the Service requirements for skilled men.

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(1) A.M.O. A.196/41.
(2) A.M.O. A.270/41.
(3) A.M.O. A.468/41.
(4) A.M. File A.294462/41.
(5) A.M. File S.76831 and Cmd. 6339.

(c) Whether the demands of the Services for skilled men as recruits to Service trades during the period ending 31 March 1942, should in any respect be modified.

The object of the enquiry was to re-assure industry that the call up of skilled men from civil life was essential and that the Services were doing their utmost to secure the most efficient use of their skilled men.

The committee reported that the need for taking every possible step to employ men according to their skill had long been recognised by the Royal Air Force. Since the outbreak of war, the R.A.F. had made a systematic search for skilled men from among its members with a view to using their skill in a Service trade. Arrangements were already in force which enabled any airman at any time to ask for a trade test or to be put on a training course in order to re-muster to a more highly skilled trade. The re-mustering process was continuous and provided an opportunity for correcting initial mistakes, for discovering skilled men who had been called up as reservists or auxiliaries without regard for their civil occupation and for discovering suitable trainees. The committee described the Royal Air Force technical training establishments as equally impressive by reason of their scale and by reason of the efficiency with which they were conducted.

On the whole, the Royal Air Force came out well from this meticulous examination, but the committee nevertheless suggested various means of improving the situation. They felt that there were still too many men who were square pegs in round holes. The R.A.F. embarked, therefore, on a publicity campaign within the Service in order to bring home to individuals the urgency of the manpower situation and the necessity on patriotic grounds for accepting the highest form of training for which the individual was found suitable. Loss of pay while training for a new trade, a serious deterrent to remustering, was stopped. The remustering ban imposed on men assigned to ground defence was withdrawn. Further material for training was made available by the substitution of women for men in the operating of balloons.(1) The policy of repair by replacement was extended, as an alternative to the use of valuable skilled men. In general, however, the committee's report gave full support to the measures which had already been initiated by the Royal Air Force with a view to ensuring the economical use of skilled manpower, including the substitution of women for men to the maximum extent compatible with efficiency.

A Revised Demand for Skilled Men from Industry

At the request of Sir William Beveridge, the Director of Manning recalculated in November 1941, the R.A.F. demand for skilled men in the engineering and allied trades.(2) With the exception of Fitters Marine and Coppersmith and Sheet Metal Workers, the new demand represented 10 per cent of the full demand for the corresponding R.A.F. feeder trade. (This compared with the demand, made in the autumn of 1940, that 20 per cent of Fitter requirements should be met from the

(1) A.M. File S.70302.
(2) A.M. File S.55208.

entry of skilled fitters from industry.(1) The balance of the demand was assumed to be met by the entry of suitable semi-skilled and unskilled men for training, within the R.A.F. training organisation, up to the full standard required of the highly skilled Group I trade. The demand for 10 per cent skilled tradesmen represented the proportion of skill and experience considered necessary to meet the demand for the N.C.O. and supervisory posts.

As regards Fitters Marine, the demand for fully skilled men was reduced to a minimum of 5 per cent of the total needs. For this trade, and also for Fitter Torpedo, there was no R.A.F. feeder trade and it would, therefore, normally be necessary to ask for 100 per cent of requirements in those trades to be met from fully skilled men, but the R.A.F. agreed to accept basically trained Fitters from the Ministry of Labour Training Centre to make up the balance of requirements. As regards the metal worker trades, the demand was made in respect of the component trade. Since there were no ab initio training facilities for those trades, it was necessary to ask for the full quota to be met by the supply of skilled tradesmen.

The Associated Trades Scheme

Under the procedure laid down in the Schedule of Reserved Occupations, the Royal Air Force could only accept men from unasterisked trades for service in their corresponding Service trade. This soon caused difficulty. In some cases, the recruits were found to have been wrongly classified by the Ministry of Labour and National Service. For instance, a flour miller had been sent forward as a miller. In other cases, the recruit had had practically no experience in his trade which merely happened to be the one in which he was employed at the time of his registration.(2) Many such recruits were consequently rejected by the Trade Test Board as being unsuitable for their appropriate Service trade and they had, therefore, to be discharged from the Royal Air Force and be returned to industry.

Many of these men who had thus to be discharged from the R.A.F. were suitable for employment in, or for training in, another skilled trade or in a less skilled, but associated trade. For instance, a recruit rejected as an Armourer (bombs) might be suitable as an Armourer (guns), a Flight Mechanic or an Instrument Repairer II. In order not to lose the services of such men for the Air Force, the Air Ministry asked the Ministry of Labour in July 1941, that they should be allowed to retain an unasterisked tradesman in a trade other than his appropriate Service trade if, after appearing before the Trade Test Board, he did not reach the standard required for his Service trade. As a result of these Air Ministry representations, the Associated Trade Scheme was drawn up. It provided, in effect, that although men in unasterisked occupations would continue to be posted under the existing rule for service in their corresponding trade, they could, if found by the Trade Test Board to be unsuitable for that trade, be accepted for training, in that trade or in one

(1) A.M. File S.58432.
(2) A.M. File A.905587/47.

of the associated Service trades.(1) In addition, recruits could be accepted, if suitable, for a trade or group higher than their corresponding Service trade. The scheme came into operation in September 1941.(2)

The Questionnaire Scheme for Skilled Tradesmen

As a result of the scheme for drawing a distinction between protected and unprotected establishments, considerable numbers of younger, skilled men were de-reserved during the summer of 1941 and became available for call up to the Services. The Ministry of Labour and National Service had a special responsibility for seeing that these skilled men taken from industry were allocated to the Services in trades in which their skill and experience could be used to the maximum extent. It was felt that the current arrangements whereby allocation was made to Service trades in accordance with a man's occupational classification was insufficient and that if more information could be obtained about the man's civilian experience and employment, the degree of his skill could be more easily determined, or his potentialities assessed, both by the Ministry of Labour and by the Service Departments. It was accordingly agreed, in October 1941, between the Ministry of Labour and the Air Ministry that in future, the skill of men brought forward under the National Service (Armed Forces) Act for service in certain skilled trades(3) should be investigated before their enlistment.(4)

Briefly, the scheme provided for a questionnaire covering the man's skill and experience to be prepared under Ministry of Labour arrangements after the recruit had been medically examined and interviewed by the Royal Air Force Recruiting Officer.(5) The Trade Test Board at the appropriate Recruiting Centre would consider this questionnaire and would indicate on it the highest skilled trade or trades for which the man appeared, from the information given, to be suitable. If the Ministry of Labour confirmed the recommendation of the Trade Test Board, the man would be called up for the trade stated. He would be trade tested on reporting for duty but would only be accepted for the trade or trades agreed by the Ministry of Labour.

Because the primary need of the Royal Air Force in regard to Group I tradesmen was for men of the N.C.O. type, and because it was felt that few of the younger men who were being released from industry would have had the experience necessary for an N.C.O., it was agreed between the Air Ministry and the Ministry of Labour that no skilled man under the age of 23 should be accepted under the questionnaire scheme unless he

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(1) See Appendix 13 for a list of the associated trades in which recruits could be enlisted if they were rejected by the Central Trade Test Board for their appropriate Service Trade.
(2) A.M. File A.906555/47.
(3) These trades were Fitter II, Instrument Repairer I, Fitter (Marine), Fitter (M.T.), Electrician I.
(4) A.M. File A.906570/47.
(5) Form N.S. 191.

had been employed as a foreman in his trade.(1) As civilian craftsmen, however skilled, could not be familiar with Royal Air Force equipment, a fully qualified civilian craftsman was posted to the equivalent Group I R.A.F. trade 'under training'. During his training period, he received the full tradesman's rate of pay. Even after training, however, few of these qualified tradesmen were good N.C.O.s and universally postable. Less skilled civilian craftsmen were mustered as 'aircrafthands under training tradesmen'.

Although the S(Q) scheme was limited to men whose civilian occupations were feeders to the five Group I trades, the primary object of the scheme was to ensure that men were posted to trades in which their industrial skill would be used to the best advantage. In some cases, the recruit's industrial and educational background showed that he was not suitable for any of the Group I trades but was suitable for one or more of the associated Group II trades. In these circumstances, the Trade Test Board indicated, not a Group I trade, but a Group II trade as first choice and possibly another Group II trade as second choice.

The S(Q) scheme came into operation in the middle of October 1941, but had to be suspended in the following February on account of the Air Ministry decision to suspend demands for Group I tradesmen in view of the huge surplus which then existed in the Air Force.

Developments During 1942 and 1943

The years 1942 and 1943 were a period of stabilisation and, yet, one of great change in so far as the supply of tradesmen and the manning of R.A.F. trades were concerned. By the beginning of 1942, co-operation between the Air Ministry and the Ministry of Labour during the preceding years had resulted in the evolution of the most satisfactory methods of ensuring, firstly, that skilled recruits called up from industry were capable of filling the posts for which they were required and secondly, that the skill and experience of such men were used economically and to the best advantage in the Service. Their success having been proved, these measures naturally continued to be applied with little change throughout 1942 and 1943. On the other hand, the two year period was one of major change in that, whereas it opened with the Royal Air Force holding large surpluses of tradesmen, it closed with the R.A.F. bearing serious deficiencies of ground staff which threatened to become even worse in view of the tiny trickle of new manpower which was then being allocated to the Royal Air Force for tradesmen's duties. Such a transition, from plenty to scarcity, in so short a time demanded far-reaching changes in manning policy.

A Temporary Surplus of Tradesmen

A number of factors had combined in the autumn of 1941 to produce a temporary surplus of Royal Air Force ground staff. Air Chief Marshal Sir Hugh Dowding, who was charged by the Air Council with the task of investigating its causes and proposing

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(1) This questionnaire scheme was generally referred to as the S(Q) Scheme.

means of disposing of it, reported that the tremendous miscalculations which had been made in the recruiting requirements had been due to the gross inaccuracy of the estimates of aircraft production which the Manning staff had received from the Ministry of Aircraft Production and on which the recruiting programme was based. The situation caused by the short-fall in British aircraft production was made worse by the need to divert to Russia large quantities of American aircraft which had originally been destined for the Royal Air Force.(1) The surplus of ground staff increased still further by the reductions which had recently been authorised, and which were then being put into effect, in the establishment margins, which had proved to be excessive, for casualties and unforeseen contingencies.(2)

As a result of these factors, a surplus of about 52,000 men, including 26,000 from the Fitter group and 20,000 aircrafthands, had arisen in the R.A.F. by November 1941.(3) Following the established policy of employing skilled men to the best national advantage, the Director of Manning had already offered to release 6,000 of them, consisting of 2,000 Fitters II and 4,000 Flight Mechanics, to the Ministry of Aircraft Production. He offered an additional 5,000 for essential work in other industries. The airmen were offered release for six months and went to the factories as civilians. Six thousand aircrafthands were offered release for civilian employment with Air Ministry contractors engaged on aerodrome and maintenance work, and fifty riggers were loaned to the British Overseas Airways Corporation.

Industry was slow to absorb these released airmen, owing to the fact that many employers were reluctant to engage men the value of whose training, both technical and disciplinary, they doubted and whom they would be liable to lose after six months. In order to overcome this prejudice, the Director of Manning agreed to give three or four months notice of the men's recall to the R.A.F. which would, in any case, be staggered. At the same time, he offered to loan an additional 8,500 men to the aircraft industry, but, because of the industry's difficulty in absorbing these men, he agreed that 1,000 Fitters and Flight Mechanics should be released for work in munitions factories. Loans of airmen were also made to the Army and the Royal Navy in the spring of 1942, those to the Army accounting for 1,400 men and those to the Navy for 900 men.(4)

The surplus of aircrafthands had been disposed of by February 1942, mainly by the men's absorption in the newly formed R.A.F. Regiment, but the surplus of Fitters continued to grow until it reached a peak of 42,000 at the end of March 1942.(5) The increase in the surplus was due to the completion of courses by trainees and to the reduced short-term

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(1) A.M. File S.76111.
(2) A.M. File S.76831.
(3) The entry of the United States of America into the war in December 1941, brought about yet another decrease in the number of American aircraft supplied to the Royal Air Force and, therefore, a further increase in the surplus of personnel.
(4) A.M. File A.358381/42.
(5) A.M. File S.76111.

requirements of the latest expansion programme. Measures that were taken to reduce the surplus included reductions in intakes of new manpower, cuts in training capacity and the provision of refresher courses.(1) Early in May 1942, Sir Hugh Dowding reported that all practicable steps to reduce the surplus had been or were being taken and that no further action was required as, on current forecasts, the surplus would have diminished to such an extent by October 1942 that it would be necessary to begin withdrawing the released fitters from industry.(2)

The effects on the Royal Air Force of this surplus of tradesmen were mixed. Sir Hugh Dowding deplored the fact that they caused inefficiency because they prevented the formation of economical habits of work and led to applications for increases in domestic establishments in order to meet the needs of the surplus personnel. Against this had to be set a number of substantial advantages. The R.A.F. was able to raise the standard of its tradesmen's skill by lengthening training courses and by posting men supernumerary to establishments. The number of men who could be spared for Maker's courses of instruction increased and the population of N.C.O. courses could be enlarged with a view to producing a greater number of men who would be ready for promotion to N.C.O. posts as and when expansion occurred. The existence of a surplus of skilled men allowed the R.A.F. to reduce its demand for skilled direct entrants.

The problem of securing the ultimate return of the airmen who had been released to industry was tackled in May 1942, when three months notice of recall was given to the Ministry of Labour and National Service.(3) On account of expansion, the Royal Air Force demand for fitters was already beginning to rise, it was proving difficult to abstract even 'surplus' fitters from units and Commands at home, and there was a prospect of considerable deficiencies of tradesmen. The problem of the airmen's return was not easily solved and negotiations between the Air Ministry and the Ministry of Aircraft Production dragged on for many months. The Defence Committee (Supply) agreed in July 1942 that there should be no automatic return of the released airmen to the R.A.F. but that the Air Ministry should be free to demand the return of key men who were required for the R.A.F. expansion. By this time, the total of releases had reached a figure of over 30,000.

The Lord President's Committee of Ministers met in October 1942, to consider further the return of airmen released to the aircraft industry.(4) The Director of Manning submitted a brief which gave an up-to-date picture of the position.

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(1) A.C. Paper 36(42).
(2) See Appendix 14 for variations in the required weekly intakes to Fitter and Flight Mechanic training during the period September 1941 to May 1943.
(3) A.M. File C.S. 10792.
(4) The Lord President's Committee was set up in June 1940 with two main functions. The first was a general duty of handling, on behalf of the War Cabinet, all questions of domestic policy not specifically assigned to other Committees and concerning the work of the Civil Committees of the War Cabinet. Its second function was the specific duty of keeping continual watch over home front questions and the general trend of the nation's economic development. Its members included the Lord President of the Council (chairman), the Secretary of State for Dominion Affairs, the Lord Privy Seal, the Minister of Production, the Minister of Labour and National Service, the Chancellor of the Exchequer, the Secretary of State for the Home Department, the Minister of Home Security and the Minister of Supply.

Although the numbers of released airmen had been somewhat reduced by voluntary returns to the R.A.F., there were still more than 17,000 airmen released to industry.(1) Owing to the delay in returning these airmen, there were already heavy deficiencies in all Home Commands of Fitters and Flight Mechanics, the combined deficiency amounting to 11,200 or 12½ per cent of establishments. As the Ministry of Aircraft Production had stated that the immediate recall to the R.A.F. of all the men released to them would seriously impede production, the Air Ministry were given permission by the Lord President's Committee to take back only 500 airmen from the aircraft factories each month.(2) However, even this concession did not satisfy the Ministry of Aircraft Production who, in April 1943, asked the Air Ministry to waive their claim to the 9,000 airmen who had still to be recalled. This request was refused as, even with the return of these men, the R.A.F. would have an overall deficiency of 7 per cent in the Fitter trades on account of the reduced numbers available for trade training following the heavy cuts which the War Cabinet had made in the R.A.F. manpower demand for 1943. In July 1943, however, the Prime Minister ruled that the Ministry of Aircraft Production should be relieved of their obligation to return the released mechanics who were still working in the aircraft factories.(3)

The Air Ministry experienced similar difficulty in securing the return of 900 airmen, due to be returned to the Royal Air Force by the end of 1942, who had been loaned to the Admiralty.(4) The Admiralty contended that recent developments made it of the utmost importance that the men's recall to the R.A.F. should be delayed. Finally, in March 1943, the Admiralty agreed to return Fitters II at the rate of 100 a month and to return the 100 electricians they had borrowed from the Air Force by the end of the month.

An Extension of the Questionnaire Scheme

When the requirements of the three Fighting Services for tradesmen in engineering and allied trades were discussed with the Ministry of Labour and National Service in October 1942, it was stated that the supply of skilled tradesmen available for posting was insufficient to meet these demands and that arrangements were in hand to augment the supply by cancelling deferments.(5) The demands of the Services for skilled tradesmen in those trades were so heavy that only by the utmost economy of manpower would it be possible to meet them. This involved consideration of every man registered in those trades with a view to his allocation:-

(a) To the Service that could use his skill to the best advantage.

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(1) This total was made up as follows:-

M.A.P. Firms	12,400	(nearly all Fitter trades)
Light Alloys	2,500	(mostly aircrafthands)
Tanks, Munitions, etc.	2,300	(various trades)
Total	17,200	

(2) A.C. Mtg. 17(42).
(3) W.P.(43) 319.
(4) A.M. File A.358381/42.
(5) A.M. File A.464699/42.

(b) To a trade in that Service in which he would be most suitably employed.

For that reason, the Ministry of Labour and National Service proposed to obtain, by means of questionnaires of the kind which had already been brought into use for certain trades, details of the industrial experience of all men within the field. It was suggested that these forms,(1) representing the supply of men available for posting after examination by the Ministry of Labour, should be considered jointly by the representatives of the three Services who would settle the distribution of the available supply between them. The men's preferences would be honoured as far as possible but regard would be paid in the first instance to the relative suitability of the men to meet the respective needs of the three Services. The scheme, generally known as the 'Q' scheme, came into operation in November 1942, and superseded and incorporated the earlier S(Q) Scheme.

The Screening from Posting of Certain Tradesmen

As a result of suggestions made in August 1942, that the constant changes of personnel of units, which were due to the fact that the numerous units which were being formed at Home and Overseas could only be partially manned by airmen coming direct from training schools, were having a bad effect on the discipline of the Service, the Director of Manning convened a committee to investigate the need to screen from posting certain airmen in Home Commands.(2) He suggested that one of the reasons for the attention which had been drawn to the difficulties caused by the frequent postings of airmen was the rapidity with which the Royal Air Force had recently changed from having a surplus of ground staff to having the bare minimum of requirements. This had come as an unpleasant shock to units which had not yet become accustomed to, or adjusted themselves to the new situation of working on their bare personnel establishments.(3)

The Command representatives on the committee which had been convened by the Director of Manning agreed that the operational efficiency of a unit was seldom impaired by the posting away of a reasonable number of airmen, notwithstanding that such postings created deficiencies, always providing that certain airmen, who were in the nature of 'key' personnel, were retained. Such technical airmen as were specialists on particular aircraft or equipment, and non-technical airmen who were acquainted with the neighbourhood and surroundings and particular lay-out of a station were invaluable, and, in order to avoid such personnel being posted, the committee agreed that certain such airmen should be screened from posting for a

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(1) Form N.S. 254.
(2) A.M. File S.83539.
(3) The violence of this change can be appreciated from the following figures, representing airmen and airwomen in the aggregate, showing the establishment and strength of ground staff on 1 January and 1 July 1942:-

	Establishment	Strength
1 January 1942	632,000	670,000 (Surplus 38,000)
1 July 1942	806,000	754,000 (Deficit 52,000)

(A.M. File S.83539).

specified period. The question of screening airwomen from posting was not dealt with as their movement was not so frequent in that they were not sent overseas.(1)

The committee accordingly recommended that the following percentages of the authorised unit establishments of tradesmen in Home Commands should be screened from posting:-

(a) 25 per cent of personnel in the aircraft maintenance trades in units should be screened for at least twelve months and a further 25 per cent in Operational Training Units should be screened for six months.

(b) 20 per cent of corporals and aircraftmen drivers M.T. should be screened for twelve months.

(c) 20 per cent of aircrafthands, including all those employed on specialist duties, should be screened for six months.

(d) All airmen employed as barrack wardens should be screened for twelve months.

(e) 50 per cent of photographers employed on night photography should be screened for six months.

(f) 50 per cent of technical and non-technical instructors in Technical Training Command should be screened for eighteen months and twelve months respectively, and all Parachute Instructors in Army Co-operation Command should be screened for six months.(2)

These recommendations were submitted to the Chief of the Air Staff who agreed to them but expressed disappointment concerning the proportion of ex-trainees in overseas drafts. In his view, it should have been possible to include in overseas drafts more than 50 per cent of airmen from training as proposed by the Director of Manning. The Director of Manning accordingly had an examination made of the distribution of experience as between the Home and Overseas Commands which revealed quite definitely, in the lower ranks, that a larger proportion of the more senior airmen were serving overseas than at home. In the light of this, he proposed increasing the number of airmen being drafted overseas direct from training to 100 per cent of the drafts so far as this might be possible having regard to the formation of new units and N.C.Os. required for the voyage period.(3)

Screening of key tradesmen proved a valuable aid to efficiency during the following months and continued to be applied until the summer of 1944. It then became necessary to unscreen airmen who were fit for overseas, were likely to be in low priority release groups and had not returned recently from overseas, in order to make up deficiencies and to release tour-expired airmen, in A.C.S.E.A. and M.E.D.M.E. The general effect of the screening arrangements had been to

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(1) Airwomen were not drafted overseas until the summer of 1943.
(2) A.M.O. A.1148/42, 8 October 1942.
(3) A.M. File S.83539.

reduce inter-Command movements to the minimum consistent with expansion. The movement due to trade training and conversion courses had, however, generally increased during the period in question on account of the growing need to train serving airmen for higher grade work in view of the manpower stringency.

A Deficiency of All Classes of Tradesmen

When Target Force 'H' was being evolved in the spring of 1943, the Air Council discussed the feasibility of the new expansion programme from the manpower aspect. After allowing full provision for aircrew requirements and for officers for ground duties, it was estimated that there would be the following deficiency of trained airmen and airwomen at the beginning of 1944:-

Technical and Allied Trades	- 22,000 (4.5%)
Other Training Trades	- 2,000 (1%)
Non-Training Trades	- 45,000 (18%)
Total deficiency	- 69,000 (7%)

The percentage as between the three categories of trades would not be constant throughout the period as the capacity of the technical training organisation would limit the transfer of population between the various classes; thus the deficiency in the technical and allied trades would probably be substantially higher at the outset. This deficiency might be increased for an additional reason; as no fewer than 30 per cent of the airmen and airwomen in the non-training trades, which had already been extensively combed, would require technical training, it was possible that suitable trainees might not be forthcoming in adequate numbers. Subject to the above considerations, the overall deficiency would be borne to the extent of 66 per cent in the non-training trades. As a large proportion of the total number in these trades was made up of domestic staff, Service police and aircrafthands, it was hoped that it would be possible to maintain operational and technical standards, any sacrifice being at the expense of standards of comfort and internal security.(1)

Various measures for reducing the anticipated deficiency of tradesmen were suggested by the Air Member for Personnel and the Air Member for Supply and Organisation, and were discussed by the Air Council.(2) The possibility for shortening technical training courses was mentioned but the Air Member for Training pointed out that this would produce no extra tradesmen; it would merely produce an inferior tradesmen two weeks earlier. In fact, the length of training courses had already been cut to the minimum, the length of W.A.A.F. courses tending to be below the danger level. The Air Council finally agreed that planning for Target Force 'H' should continue despite the serious manpower deficiencies. At the same time, they approved a number of measures designed to prevent the deficiency being further increased. They agreed that:-

(1) A.C. Paper 29(43).
(2) A.C. Mtg. 7(43).

(a) No new unit (other than units normal to the expansion programme or in substitution of units in the programme) should be formed without the approval of the Expansion and Re-equipment Policy Committee.

(b) No new courses or extensions to training courses which involved additional personnel should be approved without reference to the E.R.P. Committee.

(c) A limit should be placed on the overall strength of the wireless and communications trades, which already absorbed 115,000 men, i.e. 25 per cent of the total establishment of the technical and allied trades, and more than 10 per cent of the total ground establishment.

It then became necessary to decide what proportion of the deficiency should be borne by each Home Command. It was anticipated that there would be a deficiency of approximately 40,000 ground staff by 31 July 1943. This represented approximately a 6 per cent deficiency. It was agreed in June 1943, by a Committee, whose members included nominees of the Air Member for Training, the Air Member for Personnel, the Air Member for Supply and Organisation and Air Staff, that for the time being, Home Commands should be placed in the following order of priority in the allocation of deficiencies in the three groups of trades:-(1)

	Technical & Allied Trades %	Other Training Trades %	Non-Training Trades	Overall Deficiency %
Flying Training Command	3	1	7	4
Technical Training Command	3	1	7	4
Bomber Command	4	1	9	5
Coastal Command	5	1	11	6
Transport Command	7	1	15	8
Northern Ireland	7	1	15	8
Fighter Command	9	1	20	9
Maintenance Command	8	1	18	10

On account of subsequent changes in the strategical situation, the relative importance of Commands varied so that it became necessary to alter from time to time their order of priority in regard to the allocation of manning deficiencies. By April 1944, the tradesman deficiency that was estimated for the near future had dropped to 26,000. This apparent improvement in the position was due mainly to reductions in establishments in certain Commands and not to any real improvement in the manpower available, so that the utmost possible economy in personnel was still vital. This deficiency of 26,000 that was then forecast was concentrated entirely in the non-training trades. This was due to the great progress which had been made in the training of airmen for higher work.

(1) A.M. File S.91923.

The Supply of Tradesmen during the Last Year of the War against Germany

The Director General of Manning reported in May 1944, that training and re-training of airmen had progressed to such an extent that there were surpluses in the technical and other training trades, while there were acute deficiencies in the non-training trades. He emphasised that, in order to obtain the maximum advantage from the available manpower supplies, it was essential that airmen who were temporarily surplus in certain trades should be employed in their closely allied trades in lower trade groups.(1) For example, Fitters II were to be borne against Flight Mechanic posts, the Flight Mechanics so released being borne against Maintenance Assistants and any resultant surplus in the latter trade being employed against aircrafthands G.D. This principle of 'downward' employment was expected to result in the achievement of the aggregate manning positions which were notified to Commands from time to time as a result of the overall review in the light of the war situation. Its application was expected to involve a limited amount of re-allocation between Commands of personnel in non-training trades.

The Transfer of Ground Staff to the Army

In the summer of 1944 began a series of transfers of Royal Air Force personnel to the Army and Royal Navy. The first of these resulted from a War Cabinet decision in May 1944, that the Royal Air Force should transfer to the Army, mainly for service in infantry regiments, some 2,000 airmen, consisting of 1,500 from the R.A.F. Regiment and 500 Group V tradesmen.(2) Volunteers were called for and it was hoped that the desired number would come forward. The response, however, was far from adequate, only 691 volunteers being obtained. Of these, 289 came from the R.A.F. Regiment and 402 from Group V trades.(3) The balance of 1,309 had to be transferred compulsorily.

Two months later, in July 1944, the Air Ministry undertook to transfer to the Army an additional 5,000 ground staff, fit Grade I, by the end of August.(4) The most convenient source was trade trainees in Technical Training Command. Even so, the field of trainees was found to be inadequate to meet this transfer commitment, considerable difficulty being encountered in finding enough men who conformed with the Army A.I. medical standard.(5) Because of this difficulty in finding enough untrained men for transfer, the War Office agreed to accept 1,000 fully trained tradesmen. of whom 300 were wireless operators and 700 were flight mechanics. There was no screening of ex-A.T.C. cadets, the only classes of airmen to be excluded from compulsory transfer being regular airmen and men who had volunteered for R.A.F. service.

The Employment of Aircrew Trainees on Tradesmen's Duties

On account of the slowing down of aircrew training in the summer of 1944, the training of large numbers of aircrew

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(1) A.M. File S.94480 Part I, Encl. 58E.
(2) A.M. File S.101166.
(3) A.M. File C.S. 23323.
(4) W.M.(44) 90th Conclusions
(5) Manpower Folder No.23.

trainees was delayed. In view of the serious shortage of tradesmen, it was essential that these trainees should be usefully employed on ground duties while awaiting further training. Qualified aircrew trainees were accordingly asked, in July 1944, to volunteer for employment on tasks for which airmen were urgently needed, such as clerical duties, and on duties on which their basic trade or past experience could be used to advantage.(1) These arrangements for the employment of aircrew trainees on ground duties were extended in October 1944, to aircrew cadets. They were detailed by the Officer i/c Records for duty as Clerks G.D. Clerks S.D., Equipment Assistants and, after training, as Drivers M.T. and Motor Cyclists.

Further Transfers of R.A.F. Tradesmen to the Army

In order to meet the large Army manpower requirements for the liberation of France and the final offensive in Germany, the War Cabinet decided in December 1944, that the Royal Air Force should transfer an additional 20,000 officers and airmen to the Army.(2) This number was increased to 21,000 in the following April.(3) Volunteers were called for to transfer under one of the following headings:-(4)

(a) Officers applying for Army commissions.

(b) Airmen applying for Army commissions.

(c) Airmen applying for transfer to the Army ranks.

It was recognised that by far the greater part of the 20,000 would have to be made up of compulsory transfers, and the Director General of Manning decided, with the concurrence of the Ministry of Labour and National Service, that the National Service entrant should, all other things being equal, go before the volunteer for R.A.F. service. The majority of these to be transferred were aircrafthands G.D. and R.A.F. Regiment personnel. The balance was made up of Armament Assistants, Carpenters, Maintenance Assistants and men from other trades.(5) Although this would accentuate the already serious shortages in the Group V trades, it was felt to be preferable to transferring men who had had long training and experience in skilled trades in the R.A.F. to become infantrymen in the Army, particularly as the R.A.F. would require for

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(1) A.M.O. A.689/44.
(2) W.M. (44) 173rd Conclusions, 21 December 1944.
(3) W.P. (45) 207.
(4) A.M.O.s A.196/45 and A.199/45.
(5) The Director General of Manning proposed to find the men as follows:-

	Estimated
Volunteers for transfer, both to commissioned service and to the ranks	2,000
R.A.F. Regiment	4,000
Aircrafthands G.D.	7,000
Maintenance Assistants	2,500
Carpenters II	1,000
Armament Assistants	1,000
Electricians II	1,000
Miscellaneous	1,500

Stage II of the war all its skilled men, more in fact than could be trained in the time available. The increased deficiencies in the Group V trades would have to be offset by continuing to employ tradesmen in a downward capacity.(1)

The transfer of the 20,000, increased to 21,000 in April 1945, began in March 1945, and proceeded at the rate of 2,000 per fortnight. Owing to the unexpectedly early collapse of Germany, it was found possible to suspend transfers in June and to cancel them in October 1945. Over 10,000 men had been transferred by June. Although the reasons for the transfer were fully explained to the men concerned, complaints were numerous. The most frequent causes of complaint were unwillingness to leave the R.A.F. for another Service (particularly in the case of ex-A.T.C. and volunteer entrants.); dismay at the prospect of retraining after long service in the R.A.F; loss of opportunity to use trade experience; and anxiety regarding the relative rates of release in the two Services.

The Transfer of R.A.F. Tradesmen to the Royal Navy

While these transfers of tradesmen were being made to the Army, many thousands of other R.A.F. tradesmen were being transferred to the Royal Navy for duty in the Fleet Air Arm. These transfers were made in accordance with the agreement which had been reached between the Air Ministry and the Admiralty whereby the former had received a large allocation of manpower in 1944 in order to maintain at its maximum in 1944 the hitting power of the R.A.F. against Germany. In return, it had been agreed that the R.A.F. should make 3,000 men available to the Navy on the cessation of hostilities with Germany and an additional 14,000 within six months of that date in order that the Navy might meet its commitments in the war against Japan.(2)

When the defeat of Germany had become imminent, the two Services opened discussions on this transfer and it was agreed that 2,190 airmen who were already on loan to the Fleet Air Arm should be included in the total to be transferred. In April 1945, airmen of five Group I and nine Group II trades were invited to transfer to the Fleet Air Arm.(3) They were debarred from transfer if they were serving on a regular engagement; had volunteered for enlistment for regular service; would not normally be subject to the National Service Acts; were classified in age and service release groups 1 to 28 inclusive.(4) Approximately 250 men were transferred each week until the beginning of August, by which time over 3,100 had been dealt with. Transfers were then speeded up to 450 each week on account of anticipated deficiencies of tradesmen in the Fleet Air Arm. They came to an end in October 1945.

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(1) Manpower Folder No. 23.
(2) For details of the negotiations leading up to this agreement see Chapter 5.
(3) The trades were as follows:-
Group I - Carpenter I, Electrician I, Fitter II (airframe) Fitter II (engine), Fitter (Armourer).
Group II - Acetylene Welder, Armourer, Blacksmith, Coppersmith, Electrician II, Flight Mechanic (airframe), Flight Mechanic (engine), Safety Equipment Worker, Sheet Metal Worker.
(4) A.M. File A.93627/51.

The Tradesman Position in the First Half of 1945.

It was thought at first that the limiting factor in the scale of R.A.F. operations during 1945 would be the supply of aircrews, but further investigations revealed in March 1945, that the main difficulty would be the shortage of ground crews. The War Cabinet had made no allocation of manpower to the Royal Air Force for the first six months of 1945 so that a large proportion of the entries to aircrew training, which were required at the rate of 1,200 a month, would have to come from serving airmen. The R.A.F. was already running on a deficiency of approximately 5 per cent and, after taking the aircrew and other commitments into account, this deficiency was expected to rise to 10 per cent, representing between 75,000 and 90,000 ground personnel, by September 1945. Since the deficiency could not be spread evenly between all trades, a considerably greater deficiency in certain trades might be involved. For example the prospective deficiency of clerks was 16 per cent, in medical trades it was 15 per cent and in aircraft maintenance trades it was 12 per cent. These deficiencies had a two-fold effect: they jeopardised the efficiency of units, involving risk of breakdown, for example, in clerical, medical and maintenance work; and they rendered impossible the withdrawal of eligible men for drafting to the Overseas Commands to relieve men who had completed their tour and to replace casualties and wastage.(1)

This anticipated deficiency of 10 per cent of the strength of tradesmen was regarded as too much to carry. Administrative services had, however, already been pared down to the minimum and it seemed that the only hope of achieving a balance was by cutting first line strength.(2) Accordingly, the Chief of the Air Staff was forced to recommend, and the Secretary of State to accept, cuts amounting to 37 squadrons by 1 July 1945, which would provide about 40,000 men towards meeting the deficiency of 67,000 which faced the R.A.F. at that date. The Air Council agreed that the remaining deficiency of 27,000 could be accepted.(3) The Director General of Manning warned, however, that the estimate that a saving of 40,000 men could be made should be accepted with reservation as no allowance had been made in the calculations for the build-up of the technical training organisation which was necessary to effect redistribution required for Stage II of the war.

Tradesmen for the War against Japan

The redistribution of personnel to the ultimate structure of the force required for the war against Japan, both geographically and from the trade or employment aspect, necessitated a considerable degree of retraining of tradesmen in order to adhere to the scheme for priority of release as provided in the Government plan. It was estimated that it would be necessary to remuster to maintenance and ancillary trades, with training where appropriate, some 96,000 airmen. Over 30,000 of these would have to be drawn from surplus airmen in other trades. As a preliminary measure, the Air Officer i/c Records was instructed on 8 May 1945, to select as redundant

(1) A.C. Paper 8(45).
(2) A.C. Mtg. 3(45).
(3) A.C. Paper 13(45).

approximately 5,000 airmen from specified trades.(1) The airmen to be selected as redundant were to be fit and eligible for overseas, serving in the United Kingdom or 2nd Tactical Air Force and be N.S.A. entrants.(2) If the required numbers could not be found from among N.S.A. entrants, consideration was to be given to selecting volunteer entrants exclusive of regular airmen. The selection of the 5,000 as redundant was only a first measure and represented the number, together with 10,000 surplus aircrew, that it was necessary to enter into training by the beginning of August 1945.(3)

Further instructions as to the retraining and remustering of tradesmen were issued a little later in May, when it was decided that postings of airmen to training were normally to be confined to airmen in age and service release groups higher than 25. The problem of finding enough men for retraining was made more difficult by the fact that not only had the men to have some technical experience, but age, physical fitness, educational standard, aptitude and outlook, eligibility for overseas and other factors had to be taken into account, thereby complicating an already complex question. If enough airmen in that category were not available, courses were to be kept filled, so far as possible, by men from release groups 20 - 25 if the course was of 5 weeks or less in duration, and by men from release groups 15 - 19 if the course was of 5 weeks or less and there would be a requirement for the personnel in the Home establishment. Remusterings to trades for which training was not required could be made irrespective of the release groups of the airmen. These instructions were countermanded three days before the surrender of Japan, when Officers Commanding the relevant training units in Technical Training Command were authorised to withdraw from training courses airmen who were in release groups 1 - 25 inclusive. Airmen withdrawn from training who were in release groups 1 - 21 inclusive were not to be remustered back to their original trade but were to be misemployed until such time as they were released.

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(1) The numbers and trades concerned were as follows: Shoe Repairer(150), Tailor(100), Carpenter II(900), Armament Group(1,500), Electrician Group(1,000), Instrument Group (1,000), Ground Observer(500), Total 5,150.

(2) The men were to be remustered to the following scarcity trades in the following numbers: Radar Operator(550), R/T Operator(500), Telephonists(250), R/W Mechanic(1,200), Wireless Operator (1,000), Equipment Assistant (1,000), Fabric Worker (150), Cook (500).

(3) A.M. File S.94480, Part II.

Throughout the war, the Royal Air Force was faced with the problem of finding enough potential tradesmen, of training them and then of placing them in units to the best advantage of the Service and the nation as a whole. At first, the problem lay in finding men with at least basic trade skill rather than in finding enough trainees but, as the training organisation was built up and the supply of manpower dwindled, the problem was reversed so that by the summer of 1944 there was a surplus of tradesmen in the training trades and a serious deficiency in the non-training trades.

The number of skilled tradesmen who could be expected from industry was an unknown factor in September 1939, but experience soon showed that industry, which itself was expanding greatly, could not supply the Fighting Services with nearly as many skilled men as had been hoped. As a result, the R.A.F. had to rely increasingly upon conversion courses within the Service and, to a lesser extent, upon civilian ab initio training facilities which were put at its disposal, in order to man the higher trade groups. It was soon seen that the best type of trainee for the technical trades was the man with intelligence and brains even though he had had no technical experience as opposed to the less intelligent man who had had some acquaintance with tools. The incentives to airmen to train for remustering to higher trades were increased as the war progressed and propaganda in films and magazines was used to the same end.

In the early days of the war, there was little time to deal comprehensively with training failures, and at first these were relegated to serve as aircrafthands G.D. Care had to be taken in disposing of training failures, however, in order to prevent men turning the failure to their advantage, e.g. by getting into a more profitable trade or evading early overseas drafting. As the shortage of suitable men for training became more acute, however, men employed as aircrafthands were kept continuously under review and ultimately some 60 per cent were combed out as suitable for training or re-training in a trade.(1) There was a marked reduction in training failures as a result of the introduction in 1941 and 1942 of intelligence and aptitude tests into the Central Trade Test Board examination of recruits. The general test was known as the G.V.K. Test - G (general intelligence), V (visual intelligence) and K (spatial intelligence).(2) This test was given to all entrants while further tests were given to entrants who were selected on the results of the intelligence test as worth testing for a particular trade. Applied to very large numbers of recruits, the tests disclosed broad differences in the general ability of candidates to respond to training, without discriminating against candidates where educational chances had been restricted or where social background was limited. Nevertheless, interviews were considered to be essential for the assessment of temperamental qualities.

In addition to the efforts which were made in order to secure that a recruit was selected for the right trade or for training in a suitable trade, efforts had also to be made to ensure that trained, skilled men were employed to the best advantage. Particular emphasis was placed on this in the case of skilled men recruited from industry. Successive schemes

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(1) A.M. File A.409338/42.
(2) A.M. File A.974698/48.

were evolved by the Ministry of Labour and National Service for allocating men in certain civil occupations to corresponding Service trades but these did not at first succeed. The difficulties were largely met later by the introduction, for men in occupations feeding the most vital Service trades, of the Form N.S.254 on which a very detailed record of the man's whole educational and industrial background was set down. This form enabled the posting of these men to be carried out with a high degree of precision.

In so far as the supply of Service tradesmen is concerned, the 1939 - 1945 war can be divided into several fairly distinct phases. The first was the period from the outbreak of war until the late summer of 1940. This was the period of adjustment from peace to war, of an abundance of men and of short term measures to increase the immediate supply of tradesmen. The great and rapid expansion of the R.A.F. which occurred at that period was made possible partly, if not largely, by the ex-apprentice N.C.O.s and W.O.s. Then came the beginnings of the manpower shortage, especially of skilled men, and the year 1941 saw the first real emphasis on the need for economy in men and the introduction of more effective measures for securing the full use of airmen's skill and experience. During the following two years, the Royal Air Force was undergoing a violent change from a temporary surplus to a deficiency of tradesmen which necessitated new measures within the Service to ensure the best distribution of the available manpower. From then until the end of the war, the R.A.F. bore a deficiency of tradesmen, whose distribution was varied according to the relative priority afforded to each Command, and which was borne increasingly in the non-training trades. In a highly technical organisation such as the Royal Air Force, it was always possible that a deficiency of even a very few specialist tradesmen might prevent a whole squadron going into the air, thus making idle the aircrews and the several hundred other tradesmen in the squadron.

were evolved by the Ministry of Labour and National Service for allocating men in certain civil occupations to commanding Service units but these did not at first succeed. The difficulties were largely met later by the introduction, for men in occupations forming the total civil Service, of the Form M.E.1(B) on which a very detailed record of the man's whole occupational and industrial background was set down; this form enabled the grading of these men to be carried out with a high degree of precision.

In so far as the supply of Service headquarters in overseas, the (1)(2) - (1)(3) was can be divided into several fairly distinct phases. The first was the period from the outbreak of war until the late summer of 1940. This was the period of adjustment from peace to war, of an abundance of non and of short term measures to increase the immediate supply of headquarters. The great due supply expansion of the R.A.F. which commenced at that period was made possible mainly, if not entirely, by the co-operation R.C.A.F. and W.A.A.F. Then came the beginning of the manpower shortage, especially of skilled men, and the Joint War the first real attempts on the part of the economy in each and the introduction of work schemes measures for securing the full use of manpower and skill and experience. During the following two years, the Royal Air Force was undergoing a violent change from a temporary surplus to a deficiency of manpower which necessitated a reorganization of the Division to secure the best distribution of the available manpower. From then until the end of the war, the R.A.F. here a deficiency of manpower, more distribution was varied according to the relative priority attached to each command, and which was formed accordingly in the contributing trades. In a highly technical organization such as the Royal Air Force, it was always possible that a deficiency of even a few key specialist tradesmen might prevent a whole squadron going into the air, thus making full the knowledge and experience gained during other headquarters in the airfield.

CHAPTER 9

THE WOMEN'S AUXILIARY AIR FORCE

The foundations of the Women's Auxiliary Air Force were laid by the Women's Royal Air Force which was formed early in 1918 soon after the R.A.F. had come into being. At that time some 10,000 women of the Women's Royal Naval Service and Queen Mary's Women's Auxiliary Army Corps were serving with the Royal Naval Air Service and the Royal Flying Corps, and, of these, nearly all elected to transfer to the new Service. Although only a few of the W.R.A.F personnel qualified as fitters and riggers, a greater degree of substitution was effected in other less technical trades, but by far the largest part of the Force was employed solely on domestic and clerical duties. Plans were formulated in 1919 for the continued employment of women with the R.A.F. in peace time but they had to be abandoned on account of the drastic post-war economy. By April 1920 the disbandment of the Women's Royal Air Force had been complete.

Royal Air Force Companies of the Auxiliary Territorial Service

Several suggestions for forming a Reserve of women were discussed and rejected in the years between the wars,(1) and, in 1936, a Sub-Committee of the Committee of Imperial Defence reported that the formation of a reserve of women in peace was neither desirable nor necessary. However, this decision was reversed early in 1938. In April of that year, the War Office informed the Air Ministry of their proposal to form a Reserve of Women which they visualised as providing for the R.A.F. as well as for the Army. The Air Ministry, while supporting the scheme for a common service under War Office control, wanted the segregation in special companies of women enrolled for duty with the R.A.F. This was agreed, and, when the Auxiliary Territorial Service came into being in September 1938, it contained separate R.A.F. Companies.

Following the Munich Crisis it became apparent that the R.A.F. companies of the Auxiliary Territorial Service should be brought more closely under R.A.F. control, and in December 1938, the Air Council decided to move them to localities where they could be affiliated to an Auxiliary Air Force unit.(2) Experience proved, however, that administrative and training requirements necessitated a separate Women's Service for the R.A.F. and on 28 June 1939, the Women's Auxiliary Air Force was constituted by Royal Warrant.

The R.A.F. companies of the A.T.S., of which there were forty-eight, were originally intended to be officer and N.C.O. producing units and a high standard of acceptance was set for recruits. Consequently, recruiting did not proceed very rapidly, and, on the outbreak of war, the strength was 1,734 as against a total establishment of 3,301.(3) Entry was confined to the few Service trades then open to women, namely

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(1) A.M.O. A.83/42.
(2) In January 1939 the Air Ministry took over their administration from the War Office.
(3) The establishment for a Company was 6 officers and 61 other ranks, except for 17 Companies affiliated to Balloon Centres which were each given an additional 5 volunteers as fabric workers.

M.T. Driver, Equipment Assistant, Cook, Clerk and Mess and Kitchen Staff. A small number of fabric workers were also enrolled. General recruiting was authorised on 28 August 1939 for these and the following additional trades: Teleprinter Operators, Telephone Operators and Plotters. The desirability of extending enrolment to women for airwomen's duties as opposed to potential officers and N.C.O.s had been discussed early in 1939, but it was not until 1 September that the Air Ministry issued instructions for such a step to be taken.(1)

Appointment of Director, W.A.A.F.

The question of appointing a woman adviser to the Air Ministry Staff was first raised in April 1939 while the R.A.F. companies still formed a part of the A.T.S., but it was not until when the W.A.A.F. had emerged as a separate Service that a Director, W.A.A.F. (D.W.A.A.F.) was created with the rank of Air Commodore. The duties of the Director (Miss K. J. Trefusis Forbes) were at first strictly advisory and carried no executive powers.

During the war years, the functions of D.W.A.A.F. were on several occasions reviewed and expanded. On 28 September 1939 the posting of airwomen was taken over by the Officer i/c Records. In the summer of 1940 D.W.A.A.F. was given authority to act for the Director of Postings in regard to the posting of W.A.A.F. officers. The function of D.W.A.A.F. was stated in January 1942 to be 'to furnish advice to all members of the Air Council and Service directors on those matters falling within their respective spheres of responsibility which affect the well-being of the Women's Auxiliary Air Force'. To enable her to carry out her duties, D.W.A.A.F. was authorised to convene and attend conferences of W.A.A.F.(G) officers; to visit stations as might be necessary, or to delegate officers of her staff to do so; to deal with all complaints and grievances concerning the W.A.A.F.; to control the posting of W.A.A.F.(G) officers and to advise D. of P. as regards the posting of W.A.A.F. substitution officers; to supervise and control the boards selecting W.A.A.F. personnel for commissions; to deal with any matters concerning the health and moral conduct of W.A.A.F. personnel, which by reason of their specifically feminine aspect were not suitable for administration through normal R.A.F. channels; to collaborate with the Air Member for Training in the preparation of disciplinary training courses; to decide with the concurrence of the Director of Personal Services on application referred to the Air Ministry for the compassionate posting or discharge of airwomen; and to obtain information from W.A.A.F.(G) officers concerning the well being of the W.A.A.F. and to furnish to commands and groups reports and other information which would encourage and promote the general efficiency, well being and esprit de corps of the W.A.A.F.(2)

Recruiting

Enrolment into the R.A.F companies of the A.T.S. had been effected through the A.A.F. organisation, but when the Air Ministry decided to form a separate women's service, recruiting was taken over by W.A.A.F. officers working directly

(1) A.M. File 912129/39.
(2) A.M.O. A.83/42.

under the Air Ministry. In April 1940, the Inspector of Recruiting assumed responsibility, and, by the end of June, recruiting was being effected at eight Area Headquarters. Applicants were registered and had a preliminary medical examination at the Area Depot and were then sent on to the Reception Depot at West Drayton for a final medical examination and enrolment. In 1941, Northern Ireland Area Headquarters and certain Combined Recruiting Centres were brought in to assist, as were twenty sub-depots in towns which had no Combined Recruiting Centre. (1)

Officers

While the R.A.F. companies were still administered by the War Office, officers were appointed without training on the recommendation of the county commandant and could afterwards be sent on a brief course of instruction. On 15 September 1939, D.W.A.A.F. advised the formation of a selection board to interview airwomen recommended for appointment as officers. (2) This was agreed and the Board held its first meeting on 22 September.

As early as 6 July 1939 approval had been given for two senior W.A.A.F. officers to be attached to the Air Ministry for a fortnight's experience on D.W.A.A.F.'s staff. The Air Member for Personnel agreed on 26 September that small numbers of W.A.A.F. officers should continue to be attached for temporary duty on the Directorate staff. In this way D.W.A.A.F. was able to assess the ability of the officers who, in their turn, were able to gain further experience in administration by their work in the Directorate. (3)

W.A.A.F. officers were at first charged only with administrative duties, but soon after the outbreak of war they began to be employed in substitution for R.A.F. officers. Unlike the substitution officers, the administrative officers, who were indicated by the letter (G), were additional to R.A.F. establishments. Difficulty was experienced at first in securing sufficient numbers of (G) officer candidates, but by the end of 1941, due to the slow-down in expansion and to alterations in establishments, there was a surplus of 800 (G) officers. Owing to the serious manpower shortage which had arisen by 1943, the number of W.A.A.F.(G) officers had to be reduced, (4) and substitution officers undertook a greater measure of administrative duties in addition to their normal duties.

With the exception of highly qualified specialists a number of whom were given direct entry commissions all officer appointments were reserved for serving airwomen, although some difficulty was experienced from time to time in securing the right type of officer cadet partly because of the reluctance of station commanders to give up some of their best airwomen.

Wartime Growth

On the outbreak of war, the Women's Auxiliary Air Force consisted of 234 officers and 1,500 airwomen, a total of 1,734.

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(1) See Appendix 22 for further details of wartime recruiting procedure and organisation.
(2) A.M. File A.564377/43.
(3) A.H.B./IIIF/5/1.
(4) A.C. Paper 8 (43).

The establishment for a general duties company was increased to 206 other ranks,(1) and a Record Office Company was set up with an establishment of 159. Companies affiliated to balloon units were to be allowed 20 fabric workers in lieu of 20 cooks. Immediate authority was given for recruitment up to 10,000 and a later provision of 20,000 was approved. The original peace-time companies were not disbanded until March 1940.

The mobilisation of the W.A.A.F. on 28 August 1939 after only two months existence, and its rapid expansion to some 8,000 personnel during the first five weeks of war produced acute clothing, accommodation and kindred difficulties. No uniforms were at first available and for many weeks D.W.A.A.F. and her officers were reduced to searching London and provincial cities for essential garments which they ordered from wholesale and retail houses. The accommodation position was equally unsatisfactory. It had been agreed in July 1939 that tentage for 5,000 should be earmarked for the use of W.A.A.F. on the outbreak of war, but as war broke out in September the tentage was of little value. Consequently airwomen had to be housed in all types of quarters, many of which were quite unsatisfactory from the administrative, hygienic and disciplinary aspects. Other airwomen had to return home on pay and allowances until some form of housing was available. The position improved on 26 October when the W.A.A.F. Depot at West Drayton was opened. It then became possible to give nearly all recruits a fortnight's disciplinary course. Previously, a number of them had had to be sent direct for duty to their war stations or for initial or specialised training.

General recruiting had to be suspended when the strength reached 8,000 on 6 October owing to inadequate accommodation. All companies then compiled waiting lists of candidates, and as accommodation and training facilities improved, recruiting was resumed for specified trades. Despite various restrictions imposed by the Schedule of Reserved Occupations and other Ministry of Labour controls, numbers increased rapidly, and by the spring of 1941 applications were outstripping requirements in certain trades. In order not to lose suitable applicants who would be required as personnel targets rose, the Air Ministry (D.G.M.) opened a W.A.A.F. Deferred List in May 1941. Accepted recruits were then only provisionally enrolled, and were sent home on the understanding that they would be recalled within three months. A number of recruits continued to be drafted for immediate Service.

The Registration for Employment Order came into force in June 1941. Under its terms women in specified age groups were called upon to register. Those who wished to join the W.A.A.F. were interviewed and, if accepted, were drafted for

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(1) The establishment of other ranks for a G.D. Company on the outbreak of war was as follows:-

Admin.	11	Dental Surgery	2
Clerks (G.D.)	20	Equipment Assts.	12
Clerks (S.D.)	10	Mess and Kitchen	44
Plotters	18	Medical Orderlies	5
Cooks	28	Telephone Operators	16
Drivers M.T.	28	Teleprinters	12

(A.H.B./III F/5/1)

immediate or deferred service. The Order gave a fillip to recruiting and between 1 July and 30 September over 27,000 women joined the Service.(1)

Six months later, in December 1941, the National Service (No. 2) Act went a step further by making women liable for call-up for one of the women's Services. The Act was first applied to single women born in 1920 and 1921,(2) and as they registered, women became ineligible to volunteer for the women's Services. When it was realised that the Bill would soon become law and because they doubted its exact scope, women rushed to volunteer for the Services. In one week alone, shortly before Christmas, over 10,000 women volunteered for the W.A.A.F. and, of these, some 8,000 were accepted. During the last three months of the year, strength had increased by some 34,000, to give a total strength of 98,411 on 1 January 1942.

Throughout 1942, large numbers of volunteers and National Service Act entrants were enrolled. At the same time, domestic and training accommodation improved, and the deferred service pool which had been built up during the previous year was gradually absorbed. All volunteer recruits were then again drafted for immediate service.

Meanwhile, the manpower situation was deteriorating and it seemed unlikely that the number of women available for direction would meet R.A.F. requirements. The Air Council therefore considered, in the autumn of 1942, the possibility of using women who could not be forced to leave their homes but who might provide either part or whole time local labour. The proposal to form a local service branch was set aside however, when cuts were made in the R.A.F. manpower allocation and steps were taken by the Government to ensure that the reduced demand was met.(3)

In May 1943, the W.A.A.F. reached its peak strength of 182,000, a figure which represented about 15 per cent of the current combined total personnel strength of the R.A.F. and W.A.A.F. The proportion of W.A.A.F. in Home Commands was about 20 per cent of the total overall Home strength. The W.A.A.F. was a popular Service, and had the Air Ministry been free to recruit as many women as they wished, there can be no doubt that the strength of the Force would have continued to rise as the women could have been absorbed. By the summer of 1943, however, womanpower was just as valuable as manpower, and the Air Ministry were subject to Cabinet control as to the number of women they could recruit. Consequently, after the summer of 1943, intakes failed to make good the wastage and there was a gradual decline in numbers. Voluntary recruiting, except for candidates from Northern Ireland, Eire and overseas, ceased in July 1943 as it was anticipated that N.S.A. entries would meet future requirements. Voluntary recruitment began again in January 1944 when volunteers aged between 17½ and 19 were accepted. Recruiting closed altogether in September 1944 by which date strength had dropped to approximately 172,000.

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(1) See Appendix 19 for details of W.A.A.F. intakes and wastage.
(2) Its scope was later greatly extended.
(3) A.M. File A.465204/42.

The demobilisation of W.A.A.F. personnel began on 18 June 1945. It started slowly but gathered momentum after the collapse of Japan in August and continued until the end of 1948. The W.A.A.F. dispersal centre at Wythall had a capacity for dealing with 1,000 women per day.(1)

Casualties suffered by the W.A.A.F. during the war included 187 killed, 4 missing and 420 wounded, a total of 611.

Substitution

The substitution of women for men, which was the purpose of the W.A.A.F., assumed ever increasing proportions as the war progressed and manpower became scarcer, while its scope broadened from the five Service trades open to women in the pre-war W.A.A.F. to some 80 trades by the end of the war.

After the Prime Minister's statement in Parliament on 1 September 1939, an appeal was broadcast by the Services for volunteers in particular trades. The broadcast also indicated that enlistment in the W.A.A.F. had been opened and that a limited number of vacancies existed for women skilled in the trades of Teleprinter Operator, Cook, Mess and Kitchen Staff, Clerk, Typist, Telephone Operator and Fabric Worker. Within a year, substitution had been extended to seventeen trades. There was at first little substitution by W.A.A.F. officers who were appointed mainly for administrative duties in connection with airwomen.

Although accommodation difficulties influenced the rate of substitution during the first months of the war, a further curb on expansion lay in the fact that W.A.A.F. personnel were not fully subject to the Air Force Act and consequently had no power of command over R.A.F. personnel. Moreover, the Air Ministry had no power to hold W.A.A.F. personnel to their contract(2) and it was most uneconomical from both the financial and organisation aspects to give women lengthy and expensive trade training when they could 'walk-out' at will. Because of the disciplinary position it was impossible to substitute airwomen for airmen above the rank of corporal, except in their own trade (administrative) and in the trade of cook,(3) with the result that dissatisfaction because of the lack of promotion began to manifest itself. At a meeting convened by Sir William Beveridge in February 1941 the wastage rate for the W.A.A.F. was reported to be 25 per cent of the intake. Two months later, however, in April when the Defence (Women's Forces) Regulations came into effect, and W.A.A.F.

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(1) See Chapter 12 for further details of the demobilisation of the W.A.A.F.

(2) Recruits were enrolled for the duration of the war and undertook to:-
(a) Fulfil all rules, regulations and instructions laid down from time to time for the Forces;
(b) Obey all orders given by those placed in authority over them;
(c) Perform any work required by those placed in authority over them.
They agreed to:-
(a) A termination of their services by the Air Council on 15 days notice in writing;
(b) Become subject to the Official Secrets Act.

(3) A.C. Paper 29 (41).

personnel then became members of the Armed Forces of the Crown, the whole basis of W.A.A.F. service was altered, and a greater degree of substitution was made possible. As a result, the wastage rate dropped,(1) the disciplinary position was improved, and as women could henceforth be held to their engagements it became possible to introduce deferred service in May 1941.

As early as June 1940 the Director of Manning suggested that a Standing Committee should be set up in order to keep the question of W.A.A.F. substitution constantly under review.(2) Until then the problem had been considered from the particular aspect of individual employment rather from the broader scope which existed for the further employment of women. The Air Member for Personnel supported the Director of Manning's suggestion and in September 1940, the Air Council set up a Standing Committee to consider the 'Substitution of W.A.A.F. for R.A.F. personnel'. Its terms of reference were:-

(i) To keep under review the general policy of substituting W.A.A.F. for R.A.F. personnel, having regard to the manpower position and the war situation, and in particular

(ii) To investigate the practicability of (a) extending the substitution of airwomen for airmen in R.A.F. trades already employing W.A.A.F. personnel and (b) substituting airwomen for airmen in R.A.F. trades not previously open to the W.A.A.F. and to make recommendations.

The Committee, which was under the chairmanship of the Director of Manning(3) held 71 meetings and issued four Interim Reports. Its fifth and final Report was issued in August 1945.

The Committee's first Interim Report, which was issued in April 1941, included a résumé of the position in September 1940. At that time W.A.A.F. officers were replacing R.A.F. personnel on Code and Cypher, and Photographic Interpreter duties. Airwomen were employed in two Group II, two Group III, seven Group IV and six Group V trades.(4) It had been assumed that three women would be required to replace

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(1) See Appendix 19.

(2) A.M. File A.96084/40.

(3) The constitution of the Committee was as follows:- The Director of Manning (chairman), the Director of Servicing and Maintenance, the Director of Technical Training, the Director General of Organisation, the Director W.A.A.F. and S.7(g) (Secretary). Representatives of other Directorates and Branches attended meetings when questions affecting them were to be discussed (A.C.29 (41)).

(4) These trades were as follows:-

Group II - Instrument Mechanic, W.T. (Slip Reader) Operator.

Group III - Fabric Worker (Balloon), Fabric Worker (Balloon Rigger).

Group IV - Equipment Assistant, Clerk S.D., Clerk G.D., Clerk Accounting, Administrative, Teleprinter Operator, Radio Operator.

Group V - Cook, Telephone Operator, Mess and Kitchen Staff, M.T. Driver, Dental Surgery Attendant, Sick Quarters Attendant, Aircrafthand.

two men in these trades, and the first war establishment for the W.A.A.F. had been on that basis. Experience had shown, however, that a one for one basis was practicable, except in the trades of M.T. driver and cook, where the nature of the work demanded a three for two rate of substitution.

Commands were consulted early in 1941 as to the possibility of employing women in Group I trades, but the general opinion was that that was not possible. The view held was that women had no inherent mechanical instinct and, consequently, could not be trained to reach the high degree of skill required, bearing in mind particularly the extent to which Group I tradesmen had already been diluted by Group II men, and the extent to which the former were required to exercise supervision. While the same principles applied to some Group II trades, there were others in which the Committee felt that women might be trained up to the required degree of skill, and they recommended that a number of women should be trained in those trades and be tried out in units to see whether they were a success.(1)

At first the substitution of W.A.A.F. for R.A.F. personnel was confined to Home Commands, where it was only carried down as far as Station Establishments, but as the manpower position deteriorated and confidence in W.A.A.F. personnel grew, the scope of substitution was broadened. In the late summer of 1940, three W.A.A.F. officers were posted overseas for Special Duties. A year later, other W.A.A.F. officers were sent to the Middle East and South Africa. Airwomen were not drafted overseas until the summer of 1943. W.A.A.F. officers were first sent to Air Command South East Asia late in 1943 and were soon followed by airwomen. Late in 1944, a small number of officers were posted to Canada, Australia and the United States of America. On 1 May 1945, 449 W.A.A.F. officers and 4,595 airwomen were serving overseas.(2)

The Substitution Committee raised the question, in March 1941, of the possibility of employing airwomen with squadrons, as opposed to Station Headquarters with squadrons thereon.(3) Army Co-operation Command and Bomber Command both opposed such a step because of the diversity of aircraft types and because women could not be expected to serve at certain stations so that mobility would be hampered. Fighter Command and Coastal Command considered, however, that substitution would be feasible in certain trades. The possibility of airwomen being subject to enemy attack was accepted. In September 1941, the Committee agreed that a small proportion of substitution in certain trades was necessary in all squadrons throughout the Operational Commands, but that this substitution should be given the lowest order of priority.

One of the most profitable fields of substitution by members of the W.A.A.F. was opened up in 1941 when airwomen began to replace airmen as balloon operators. Early in 1941, the Air Officer Commanding Balloon Command was asked by the Substitution Committee to give his views on the employment of women as Balloon Operators. He considered that women were

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(1) A.C. Paper 29 (41).
(2) R.A.F. Personnel Statistics for 3 September 1939 to 1 September 1945.
(3) A.M. File A.96084/40.

not physically capable of handling the balloons, especially as the work had to be carried out throughout the 24 hours in inclement weather. The Committee felt, however, that women might be capable of handling balloons in view of the fact that they had proved quite capable of handling and housing airships during the 1914 - 1918 war, and especially that by 1941 means had been found of anchoring the balloon at the site. The Committee accordingly asked the A.O.C. Balloon Command to reconsider the employment of women as Balloon Operators and to carry out an experiment by substituting 100 per cent women on a few sites and at Flight Headquarters. This experiment proved a complete success and it was agreed that women should be employed as Balloon Operators throughout the Command to the extent of approximately 66 per cent of the male personnel. This substitution was to be achieved by April 1943. Substitution of balloon crews was to be on the basis of 16 airwomen in place of 11 airmen.(1) The W.A.A.F. crew was subsequently reduced in numbers, first to fifteen, and then, in December 1942, to two N.C.O.s and ten airwomen as a result of the introduction of improved mechanical facilities for operating balloons and the reduction of night watches to one site in each flight. By the autumn of 1942, over 12,000 airwomen had been trained as balloon operators and a further 4,000 were under training.

Airwomen were serving in all trade groups by the summer of 1943 although, as yet, less than 150 were employed in Group I trades. The degree of substitution in the United Kingdom varied considerably from trade to trade according to the nature of the work and to the proportion of the strength of a trade which was required for service overseas. Later in the war, doubts were expressed as to the suitability of the scales of W.A.A.F. substitution and it was suggested that W.A.A.F. personnel were being overworked. The Substitution Committee were asked to say whether these scales were adequate and suitable under existing conditions. The Committee agreed that the difficulty was due to the strength position, many trades being under-manned at this time, rather than the airwomen's inability to substitute for airmen on a one for one basis, and that account should be taken of the compulsory duties required to be undertaken in addition to the trade duties. The difficulties in W.A.A.F. substitution appeared to be in trades with a high percentage of substitution and this seemed to indicate a reduction in the percentage. An investigation was made into the conditions of work of W.A.A.F. flight mechanics following representations that they were unable to work nine hours a day at the bench. This clearly established that the one to one basis of substitution broke down when there was a high percentage of substitution and that in this particular trade 100 per cent substitution would require 175 airwomen to do the same amount of work, in the same time, as 100 men. It was therefore agreed that the basis of substitution should vary with the percentage of substitution effected.(2)

A comparison between the first and final reports of the Substitution Committee, issued April 1941 and August 1945 respectively,(3) reveals the breadth and extent of the substitution which resulted from the Committee's investigations

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(1) Second Interim Report of the W.A.A.F. Substitution Committee.

(2) Final Report of the W.A.A.F. Substitution Committee.

(3) A.M. File A.96084/40.

and recommendations. Substitution had been found possible in fifteen officer appointments(1) and 59 R.A.F. trades, in addition to 17 ancillary trades established solely for the W.A.A.F. and 4 specialist W.A.A.F. trades.(2) It had been effected in all trade groups although the proportion of substitution had been kept down by the fact that men had to be left in all trades in order to meet overseas requirements. The employment of W.A.A.F. officers on substitution duties was valuable in that it allowed W.A.A.F. personnel to be used to full capacity and also in that it released highly qualified R.A.F. officers for duty in theatres or places unsuitable for women.

Training - Officers

It was originally intended to employ W.A.A.F. officers solely on administrative duties in connection with airwomen, and by September 1939 approximately 400 W.A.A.F. personnel had attended the R.A.F. five day courses at the A.T.S. School of Instruction at Chelsea Barracks. On the outbreak of war approval was given for an Officers' Training School but it was almost a year before this materialised. On 3 June 1940, the R.A.F. School of Administration was opened to W.A.A.F. officers and cadets who were given a 14 days course.(3)

By this time, however, the substitution of R.A.F. by W.A.A.F. officers had been approved and introduced in several categories. W.A.A.F. Code and Cypher officers were authorised in September 1939, and training began at the R.A.F. Code and Cypher School in the following month. Soon afterwards, D.W.A.A.F. urged that substitution officers should be given an administrative course in addition to their technical training, and in August 1940 a school was opened for the disciplinary training of Code and Cypher officers. This school, which was known as the W.A.A.F. Officers' Instructional Centre, later accepted newly appointed administrative officers and the course was then lengthened from 7 to 14 days. During the remaining war years, the W.A.A.F. Officers School was moved several times, and, as it acquired more accommodation, increased its range of courses. By the beginning of 1942 it was providing four week Initial and Advanced Administration Courses and two week Staff and Refresher Courses. It later provided an eight week O.C.T.U. course, an elementary administrative course for substitution officers, and a more advanced administrative course.(4)

Training - Airwomen

The pre-war volunteers for the W.A.A.F. received peacetime training where possible, but, with the exception of some 400 who attended the five day course at Chelsea Barracks, this only amounted to an hour a week on an A.A.F. station. It was understood that because of the shortage of accommodation, W.A.A.F. would not be called up until three months after the declaration of war, and that, during these three months they would be given further training to fit them for posting for

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(1) See Appendix 20 for duties on which W.A.A.F. officers were employed.
(2) See Appendix 21 for list of trades in which airwomen were employed in July 1944.
(3) A.M. File A.33234/39.
(4) A.M. File A.432920/42.

duty to their war stations.(1) When war was declared, however, it was found necessary to embody and employ these airwomen immediately. New trades were introduced, and the great demand for airwomen in certain trades resulted in recruits being posted to war stations after little or no training.

The W.A.A.F. Depot at West Drayton was opened in October 1939 to provide accommodation and training for recruits and other personnel. In addition to the 14 days' disciplinary course for recruits it provided trade training for instrument mechanics and cooks. Accommodation became increasingly inadequate and in September 1940 the W.A.A.F. Depot underwent the first of its many moves in search of larger premises.

Trade training for airwomen was provided at several types of establishment during the first months of the war. For instance, teleprinter operators were sent to G.P.O. Centres, instrument mechanics and cooks were trained at West Drayton and fabric workers at Balloon Centres. A new training school for airwomen was opened in July at Melksham and provided technical training for fabric workers, equipment assistants, cooks, instrument mechanics and clerks (accounting). Training for other trades was provided at R.A.F. technical training schools throughout the country. At first there was opposition to W.A.A.F. officers and airwomen being given technical training side by side with R.A.F. officers and airmen, but this opposition gradually died down as the success of co-operative training was proved.

Overseas Assistance

Although there was no official scheme for their recruitment in the Colonial Empire, many women made their way to the United Kingdom in order to offer their services to the Women's Auxiliary Air Force. About eighty came from the Caribbean area and small numbers came from other parts of the Colonial Empire. From 1942 to 1944, women in foreign countries who wished to join the W.A.A.F. were covered by the Ministry of Labour Overseas Volunteer scheme. Applicants were provisionally accepted by a British Consul or Air Attache and were sent to the United Kingdom for final acceptance. In 1943, no fewer than 48 countries were represented in the W.A.A.F.(2)

In response to the urgent representations of the Air Officer Commanding-in-Chief Middle East, in view of the increasing stringency of the manpower situation, the Secretary of State for Air approved in principle, in February 1943, the local recruitment in the Middle East of approximately 2,000 airwomen for duty in certain trades.(3) The scheme which was subsequently drawn up covered both women of British nationality, who were liable for compulsory service under the National Service (Egypt) Act, and volunteers of other nationalities.(4) Polish and French (including Syrian) subjects were not considered for enrolment as they had their

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(1) A.H.B./III F/5/1.
(2) A.M. File S.92729.
(3) A.M. File S.76800.
(4) Women of the following nationalities were eligible for recruitment: British, Czech, Palestinian, Yugoslav, Russian, Belgian, Greek, Armenian, Iraqi, Iranian, Dutch, Norwegian, and in certain cases, undetermined nationals.

own women's organisation. Authority was given to Middle East Command in May 1943 to commission a percentage of locally enlisted airwomen, the percentage of established posts which could be filled by locally enlisted personnel being limited to 25 per cent. Recruiting was extended to Cyprus in June 1943 and to Kenya in October 1943. For various reasons connected with local conditions and requirements, it was decided that it would not be practicable to recruit women in the Middle East into all the trades which were open to them in the United Kingdom,(1) and it was not until late in 1943 that two technical trades were opened to them.

The first months of recruiting in the Middle East proved to be disappointing. This was probably due to several factors. The Auxiliary Territorial Service had been recruiting for some two years previously and, since the Middle East was no longer an active theatre of operations, the patriotic incentive was not so keen. The peak strength of locally enlisted W.A.A.F. in the Middle East, which was reached in December 1944, was only approximately 900 as compared with a target of 2,000.

Suggestions were made in 1943 and 1944 for the formation of an Indian W.A.A.F. but political and practical objections made such a scheme impossible and the R.A.F. in India continued to rely on the Indian Women's Auxiliary Corps, the W.A.C.(I), which was controlled by the Army but provided women, both European and Indian, for duty with all three services. Because insufficient numbers of W.A.C.(I) of the desired quality could be obtained, W.A.A.F. personnel had eventually to be sent to India from the United Kingdom. Because of these political and racial difficulties, the Air Ministry was unable to tap the potentially valuable source of supply which Indian and Cingalese women offered.(2)

Welfare

Rumours derogatory to the Women's Services began to circulate in 1940 and 1941, and in order to reassure public opinion the Minister of Labour and National Service undertook, in December 1941, to review with the Ministers of the Service Departments the question of amenities and other facilities for women in the Auxiliary Services. A committee under the chairmanship of Miss Violet Markham (Mrs. James Carruthers) was set up in February 1942 and issued its report in the following August. The Committee's findings showed that the rumours concerning bad accommodation and facilities were often true, but accommodation was being gradually improved by being brought to scale and standard. These items were necessarily difficult for both men and women and, compared with those of the men, the women's conditions were, if anything, favourable.

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(1) It was decided to recruit women initially into the following trades: Clerk G.D., Clerk S.D., Clerk E.A., Clerk P.A., Equipment Assistant, Safety Equipment Assistant, Fabric Worker, Aircrafthand G.D., Telephone Attendant, Photographer, Teleprinter Operator, Radio Telephony Operator, Cook and Butcher, Nursing Orderly.

(2) A.M. File S.103618.

When the initial difficulties of accommodation had been overcome, the provision of welfare and recreation facilities was speeded up and the position soon began to improve. Many stations provided facilities for organised outdoor sport, and provision was also made for indoor rest and recreation. The R.A.F. Benevolent Fund extended to W.A.A.F. personnel help that was comparable to that which it gave to the R.A.F. and the R.A.F. Comforts Fund also included the W.A.A.F. in its activities.

Publicity

Publicity for the W.A.A.F. was at first carried out, quite successfully, by the R.A.F. Air Ministry Directorate of Public Relations, but two factors early in 1941 made necessary the formation of a special branch (P.R.10) to deal solely with W.A.A.F. publicity.(1) One of these was the projected vast expansion of the W.A.A.F. following the Prime Minister's request for an additional 50,000 W.A.A.F. personnel. The other was the need to prevent anti-W.A.A.F. publicity. The women's Services were at that time suffering from undesirable limelight, and it was vital that good publicity should be given and the good co-operation of the Press maintained in order to counteract the current rumours about the Service.

In spite of the W.A.A.F.'s popularity, the appeal of a uniform, the favourable Press comments on the Service and the National Service (No.2) Act, official publicity on a considerable scale continued to be essential to enable the Air Ministry to secure the number and quality of recruits that were required. The expansion of the W.A.A.F. had nearly reached its peak by April 1943, however, and the good reputation of the Service was firmly established.

The Future of the W.A.A.F.

The question of the employment of women in the Services in peacetime was considered in 1943 by a Committee, appointed by the War Cabinet, under the chairmanship of Mr. R. Assheton, Financial Secretary to the Treasury. The Directors of the Women's Services were invited to appear before the Committee and to give their views. The Director of the W.A.A.F. urged strongly that the W.A.A.F. should be retained after the war as a permanent adjunct to the R.A.F. and listed three principal advantages to recommend such a permanent force in preference to a Reserve:-

(a) Parents would be habituated to the idea of their daughters belonging to a Service.

(b) The necessary technical training could be maintained.

(c) The capabilities of women in different technical jobs would continue to be recognised by the R.A.F.

She stressed the importance of the permanent existence of the W.A.A.F. in order to maintain the necessary sense of trust amongst the members of the R.A.F. in the capacity of women to

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(1) A.M. File C.S.12470. The initial establishment was 2 W.A.A.F. officers but the branch reached a peak strength of 11 officers and 2 clerks in August 1942.

undertake work of a technical nature with the Air Force. The need to create this trust had been a hampering feature during the war.

In their Report, the Committee recorded their views with regard to the W.A.A.F. as follows:-

> 'The relation of the W.A.A.F. to the R.A.F. differs in one important respect from that of the other Auxiliary Forces to their fighting Services. The W.A.A.F. serve side by side with the R.A.F. in operational stations and in order to ensure that a women's reserve is admitted to its full share in the work of units as a matter of course immediately mobilisation occurs, it is very desirable that a regular women's service should be maintained in peacetime.'

The Committee included the following in their recommendations:-

> 'A permanent Service on the lines of the existing W.A.A.F. is desirable.'(1)

The Post War Planning Committee agreed that it would be essential to maintain in peacetime a voluntary women's reserve as experience had shown that the rapid development of strength in an emergency was dependent on the existence of a reserve of personnel who had received some Service training and were earmarked as available for a specific branch or trade in emergency. They found it far more difficult, however, to determine whether the balance of advantage lay in having a women's force on a regular basis as well in peacetime and decided in February 1945 that, for planning purposes, it should be assumed that there would be no regular W.A.A.F. in the post-war Air Force. The Committee was influenced in this decision primarily by considerations of cost and by the difficulty foreseen in obtaining suitable officers and N.C.O.s for a regular women's Service in peacetime.

The Air Member for Personnel expressed the view in June 1945 that it would not be possible to maintain a non-Regular W.A.A.F. which would be fit to play an immediate part in the opening stages of another war unless there was also a Regular cadre in peace. He favoured a small Regular W.A.A.F. which would provide both the hard core of the women's trades on mobilisation and a highly trained element in the Reserve itself and which would enable the substitution of women for men in the R.A.F. to be further developed and extended in a way that was impossible under wartime conditions. Discussions with the Air Council and the other Services followed in the latter half of 1945, and in January 1946 the Air Council agreed to ask the Cabinet to agree, in principle to the continuance in peacetime of a women's Service in the R.A.F. consisting partly of a voluntary regular full-time cadre and partly of a voluntary non-regular part-time element.(2) Cabinet approval was given in the following May.(3)

Under the Army and Air Force (Women's Services) Act of 1948, which was brought into effect on 1 February 1949, women

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(1) A.M. File C.S. 18282.
(2) A.C. Mtg. 1 (46)
(3) 16th Mtg. of Defence Committee.

could be commissioned and enlisted in the R.A.F. and its Reserves and Auxiliaries. Women officers and airwomen were fully integrated into the force to which they belonged.(1)

Major Factors in the Employment of the W.A.A.F.

Throughout the war the employment of W.A.A.F. personnel was handicapped by serious difficulties including the high incidence of sickness which, each year of the war, was nearly double that of the R.A.F. Many of these difficulties were overcome as experience was gained of W.A.A.F capabilities, or were swept away in the face of the growing manpower shortage. However justifiable these restrictions may have been, they greatly complicated drafting and distribution arrangements and added to the many difficulties which the Substitution Committee and all concerned had to face and overcome. As a result of six years experience of the W.A.A.F. in war many valuable lessons were learned as to their strengths and weaknesses and their ability to adjust themselves to the Service way of life.

The extent to which the employment of W.A.A.F. officers and airwomen was found possible during the war was remarkable, especially in view of the fundamental difficulties which faced the Air Ministry at the outset. When war was declared the Air Ministry could rely on no peacetime indications as to what W.A.A.F. could be trusted to do and what would be their standard of efficiency. As a result, their employment was at first confined mainly to the domestic and less skilled trades in Groups III, IV and V. The experimental substitution by women in Group II technical trades began in 1941, but it was not until May 1943 that sufficient faith in W.A.A.F. capabilities had been acquired for a decision to be taken to provide conversion courses to enable airwomen mustered in certain Group II trades to qualify for remustering in the allied but more highly skilled Group I trades.(2)

The problems of hygiene, homesickness, physical effort, clothing etc. had also to be dealt with, and it was found that they required entirely different treatment for women than for men and very different in 1939 from that in 1919.

The provision of accommodation of a satisfactory standard was another great difficulty, largely due to bad planning, and was one of the main stumbling blocks to substitution, especially at the beginning of the war when billets had to be used by many W.A.A.F. personnel. This barred their employment on night work in many cases because of the difficulty of providing transport between their billet and station. This difficulty was overcome as accommodation on or near the R.A.F. Station was built or adapted for W.A.A.F. Unfortunately accommodation was not interchangeable for whereas that built for women could be used quite satisfactorily for men, that built for men had to be modified for use by women. Later in the war, as the R.A.F. gained knowledge and experience of how to employ woman power it was decided that, where possible, W.A.A.F. were to share messes with R.A.F. personnel, thus preventing unnecessary building and, at the same time, economising in mess and kitchen staff.

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(1) A.M.O. A.75/49.
(2) A.M.O. A.468/45.

At first, W.A.A.F. officers and airwomen were allowed to serve only in the United Kingdom and, in the case of operational Commands, substitution could only be effected as far down as Station Headquarters. Although there was at first no establishment for W.A.A.F. personnel at certain stations, no clear cut principles had been laid down banning W.A.A.F. from serving at certain Stations in the United Kingdom and cases were dealt with individually. The Substitution Committee discussed in June 1941 whether there were any substantial reasons why W.A.A.F. should not serve at all R.A.F. Stations, and they agreed that they could henceforth be posted to any R.A.F. Station in the United Kingdom subject to the customary minimum of ten(1) and to the availability of suitable accommodation.(2) Substitution in squadrons as opposed to Stations H.Q.s with squadrons thereon was authorised by the Committee in September 1941. Complete substitution was impossible in any trade for, despite the fact that W.A.A.F. officers began to go overseas in 1940 and airwomen followed in 1943, a number of men had still to be left in each officer category and trade for service in areas that were unsuitable for women. The trades in which there was a high rate of substitution presented particular difficulty when a large force had to be found in 1945 for the war against Japan.

Although in many trades, unlimited substitution, subject to the needs of overseas commands, was found to be quite satisfactory on a one for one basis, experience showed that in some of the technical trades slightly more women than men were required as the percentage of substitution increased. In other duties such as that of radar operator, however, women's natural temperament gave them a clear advantage over men.

The Defence (Women's Forces) Regulations of April 1941 made substitution a much more profitable undertaking by giving officers His Majesty's commission and giving officers and N.C.O.s legal control of airmen. Previously little promotion above the rank of corporal had been possible with consequent dissatisfaction. Although these Regulations improved the position in Service manned units that in civilian manned units remained unsatisfactory. Late in the war, the 50 per cent substitution rate for W.A.A.F. equipment officers in civilian manned units had to be reduced to $33\frac{1}{3}$ per cent because civilian foremen and labourers objected to being controlled by W.A.A.F. officers.(3)

One of the outstanding lessons learned from the employment of W.A.A.F. side by side with R.A.F. personnel was the

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(1) This ruling concerning the minimum number of W.A.A.F. to be sent to any station had been made at the request of D.W.A.A.F. for administrative reasons. Smaller numbers would have proved extravagant from the point of view of kitting and accommodation. In isolated cases, however W.A.A.F. were employed quite satisfactorily in smaller units.

(2) 22nd Meeting of the W.A.A.F. Substitution Committee, 16 June 1941.

(3) Final Report of the W.A.A.F. Substitution Committee, August 1945.

advisability, for reasons of interchangeability, morale and economy, of making as little difference as possible between the treatment, accommodation and equipment of men and women (Great credit for the successful advocacy of this practice is due to the first D.W.A.A.F.) The realisation of these facts helped, to no small degree, the full integration of the W.A.A.F. with the R.A.F.

Achievement

The employment of large numbers of W.A.A.F. officers and airwomen was not only found to be possible during the war but proved to be a great success. Without the services of the W.A.A.F., the R.A.F. would have required an additional 150,000 airmen who could not have been obtained as easily as the women, and who could only have been provided at the expense of the other Services or production. The extent to which substitution was successfully effected was the more remarkable in view of the prejudice against the employment of women which undoubtedly existed especially at the beginning of the war. The high morale and determination of the W.A.A.F. during the first months of war were a good basis for the increasing substitution which was to follow. These women made the beginnings of substitution possible, and the continuing and growing success of the scheme was due in no small measure also to the Substitution Committee which turned its attention to every possible field where women could be employed in order to release men for combatant duties.

Manpower was the limiting factor to the war effort. The Air Staff were quick to realise this and employed women to the maximum extent. The women were employed well within what proved to be a sound scheme, and in the vast majority of cases they gave very efficient service. The R.A.F. and W.A.A.F. were more fully integrated than were either of the other two Services with their corresponding women's Force. By carefully employing women to the maximum extent, the R.A.F. was able to divert large numbers of men to other combatant duties, especially overseas.

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(Employment)

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CHAPTER 10

OVERSEAS MANPOWER ASSISTANCE FOR THE ROYAL AIR FORCE

Throughout the war, the recruitment of men and women from outside the United Kingdom provided a valuable addition to the manpower assets of the Royal Air Force. Eventually, men from all five continents were to be found in its ranks, including representatives of the great majority of British Colonial territories and of many Allied and neutral countries. As the recruitment of British and non-British nationals presented special problems and was governed by different considerations, the two types of personnel have been considered independently in the following pages. The manpower assistance afforded by the United States of America also covered a different field from that of other foreign states and has been dealt with separately.

The Recruitment of British Subjects Overseas

Overseas recruiting fell naturally into two divisions:-

(a) Recruitment to fill deficiencies on local establishments.

(b) Recruitment to meet the requirements of the Royal Air Force generally.

With regard to local establishments, it having been decided in June 1939 to suspend overseas drafting,(1) all overseas commands were authorised, immediately after the outbreak of war, to make good their deficiencies by the provisional appointment of suitably qualified candidates to commissions and the local enlistment of other ranks.(2) The question then arose as to the extent, if any, to which deficiencies could be made good by the enlistment of non-European British subjects. At first, the only authority for this was in India where the Air Officer Commanding-in-Chief was authorised, in October 1939, to accept Anglo-Indians of predominantly British descent for service in the R.A.F. squadrons of the Indian establishment(3) and Indians for the Indian Air Force for attachment to Royal Air Force units.

In connection with overseas recruitment to meet R.A.F. requirements generally, two considerations had to be taken into account:-

(a) Meeting R.A.F. requirements as rapidly as possible with due regard to economy.

(b) The natural desire of British subjects resident overseas to serve their country.

As it seemed clear in September 1939 that for some considerable time United Kingdom manpower would be adequate to fill all training vacancies, it was agreed, at an inter-departmental conference, that British subjects overseas who wished to enlist

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(1) A.M. File S.54858.
(2) A.M. File S.58322.
(3) A.M. File S.57817.

in the Armed Forces should be told that they could render better service by continuing, for the time being, to represent Imperial interests in their existing country of residence.(1) At a further inter-departmental conference in the middle of October 1939 it was agreed that a scheme should be worked out for bringing home at public cost suitable volunteers who were skilled tradesmen or experienced pilots.(2) As an interim measure, the Colonial Office issued a telegram to all Colonial Governments giving a list of the trades in which recruits were required,(3) and stating that lists of suitable volunteers might be compiled meanwhile. A similar telegram was sent by the Foreign Office in November 1939 to His Majesty's Representatives and Consular officials in neutral countries.

The question of the possible recruitment of aircrew trainees and ground staff in Newfoundland was considered separately. The Riverdale Mission that went to Canada in October 1939 was asked to consider the possibility of including Newfoundland in the proposed Empire Air Training Scheme on the basis that Newfoundlanders should receive either all or a part of their training in Canada.(4) Because of Newfoundland's financial position there was no question of her Government forming squadrons and maintaining them overseas, and it was agreed that selected personnel should join the Royal Air Force with a view to the eventual formation, if circumstances permitted, of one or two Newfoundland squadrons in the R.A.F. The E.A.T.S. agreement, which was signed in the middle of December 1939, stated that Newfoundlanders could be sent to Canada for pilot and observer training and would count against the quota of vacancies allotted to the United Kingdom. The Canadian Government later agreed that 10 per cent of the air gunner training vacancies should be allotted to the R.A.F. for Newfoundland recruits. Newfoundland aircrew recruits were selected in St. John's by a travelling board of R.A.F. officers and received the whole of their training in Canada. By the end of 1940, the Newfoundland Government was finding difficulty in filling all the air gunner vacancies and entries for pilot and observer training also began to fall short early in 1941. Any places which could not be filled were diverted to Canadians.

The possibility of the recruitment of skilled tradesmen in Newfoundland was also considered in the autumn of 1939. In November, when the Air Ministry made known its urgent need for tradesmen, the Treasury authorised the grant of free passages to the United Kingdom for recruits from Newfoundland. As it was felt that the number of applicants would not justify setting up a separate R.A.F. recruiting organisation in Newfoundland, the Air Ministry agreed to set up a joint recruiting scheme with the Army. Men who wished to join the Royal Air Force, and who appeared to be suitable, were enlisted into the Royal Artillery in Newfoundland and were then brought to the United Kingdom with other Army recruits. After their arrival in the United Kingdom they were transferred, if they were found to be suitable, to the Royal Air Force. The first draft of volunteers for R.A.F. ground duties arrived in the United Kingdom in July 1940.(5)

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(1) A.M. File S.1895.
(2) A.M. File S.59082.
(3) The trades mentioned in the telegram were: Engine Fitter, Wireless and Electrical Mechanic, Fitter Armourer, Electrician, Instrument Maker, Instrument Repairer.
(4) A.M. File S.57819.
(5) A.M. File S.57819.

The Air Ministry Overseas Recruiting Scheme

The whole question of overseas recruitment was re-examined in the spring of 1940 in the light of developments in the political, manning and training fields. There had been many reports from the Colonies and from His Majesty's Representatives in foreign countries that the pressure of local opinion was such that it would be advisable to give active encouragement to the numerous British subjects who had enquired about the possibility of enlisting in the Royal Air Force.

In the early stages of this examination it became clear that a vital part of the foundation of any such scheme for overseas recruiting must be authority to offer free conveyance to suitable candidates from their own country to the United Kingdom or to an Overseas Command for training. Constant pressure exerted upon the Treasury at last obtained this concession in June 1940.(1) Up to this time it had been the general policy of the Air Ministry to inform Air Officers Commanding-in-Chief in Overseas Commands that any likely aircrew candidates who made their own way to the United Kingdom would be welcomed on arrival and be given every consideration with a view to Royal Air Force service. The Dominions, Colonial and Foreign Offices had been asked to reply similarly to enquiries received from their own officials. It had been found, however, that the lack of authority to pay passages and of suitable recruiting machinery in all the overseas countries concerned proved a serious deterrent to any satisfactory results.

With the grant of Treasury authority for free passages for applicants for enlistment in the Royal Air Force, the Air Ministry could go ahead with the plan for widening the scope of overseas recruiting, and the Overseas Recruiting Scheme was evolved during the following months. The scheme covered experienced pilots, i.e. men with over 250 hours solo and in flying practice; men with technical qualifications, members of engineering institutes, practical engineers, particularly those experienced in telecommunications engineering; and semi-trained or untrained volunteers for training as pilots, observers, wireless operators/air gunner. Men in the first two categories were eligible for entry in commissioned rank while those in the third category entered by enlistment.(2)

The Overseas Recruiting Scheme covered all Colonies, Dependencies and Protectorates, with the exception of those in Africa, and all places where there was one of His Majesty's Representatives. There was no discrimination against coloured British subjects applying for aircrew duties, provided that especial care was taken in their selection and there was no relaxation of normal R.A.F. standards. Recruits from the colonies were selected initially by the local magistrate or other official, if they came from up-country districts, and were then examined by local Aircrew Selection and Medical Boards set up under the auspices of colonial officers in localities where there was not a Royal Air Force Command. Recruits in foreign countries were selected initially, if they came from up-country districts, by a letter of recommendation from a local resident of standing and, subsequently, by H.M. Representative, Air Attache or Military Attache.

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(1) A.M. File S.59082.
(2) A.M. File S.60600.

The schemes for recruiting in the Colonies and in foreign countries differed in respect of local selection machinery. It was considered inadvisable to set up in a foreign country anything approximating to a recruiting organisation. Criticism that volunteers from foreign countries might be less thoroughly vetted than those from the Colonies could only be proved or disproved by results. Experience showed, however, that the arrangements were completely successful.

The Governors of certain Colonies expressed a wish to give the best opportunity to locally selected volunteers for entry into R.A.F. service. Offers to provide local flying training facilities were, in consequence, received from Bermuda, Trinidad, Jamaica and the Straits Settlements without cost or responsibility falling upon the Air Ministry.(1)

Broadly speaking, it was Air Ministry policy to move overseas aircrew volunteers from their country of origin to the nearest training point, but this arrangement was complicated by the fact that certain training areas, notably Southern Rhodesia and South Africa, were barred to coloured airmen. Until the autumn of 1942 it was necessary, therefore, to bring all non-European volunteers to the United Kingdom. In 1942, negotiations with Canada on the subject of training colonial aircrew took place, as a result of which West Indian volunteers were able to proceed direct to an Initial Training Wing in Canada, and coloured airmen from other parts of the Colonial Empire could also be sent to Canada for elementary flying training, service flying training and navigator training.

In the autumn of 1940, Colonial Governors were informed that applications on an increased scale from all suitable British subjects who volunteered for aircrew duties in the Royal Air Force would be welcomed.(2) This intensification of Colonial recruiting naturally produced a greater proportion of non-European candidates than hitherto. This was the case particularly in Ceylon and Mauritius. Experience of Indian pilots, twenty-four of whom had been attached to the R.A.F.V.R. for completion of training and operational experience, had shown that non-Europeans needed about half as long again as Europeans to complete their training,(3) and in the spring of 1941 the possibility of slowing down the recruitment of non-Europeans was considered. This was possible because of the improved supplies of aircrew candidates from United Kingdom sources. The Colonial Office attached great importance, however, from the political point of view, to the maintenance of Colonial recruitment as, in many instances, this recruitment afforded to Colonial personnel their only opportunity of combatant service in the common cause. The numbers of candidates forthcoming from the Colonies were not large and the Colonial Office emphasised the impossibility of slowing down the recruitment of non-Europeans while continuing with that of Europeans in certain Colonies where the colour question arose in an acute form. The Air Ministry then reconsidered the question and agreed that of some 420 aircrew candidates who were expected to be provided by the colonies during the twelve months ending in May 1942, 243 could be non-Europeans.(4)

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(1) A.M. File S.1895.
(2) A.M. File S.69081.
(3) A.M. File S.67252.
(4) A.M. File S.69081.

The Special Technical Corps

A scheme was introduced in Malaya in August 1940, for the recruitment of local Asiatics for service with the Royal Air Force. They were enlisted into the Asiatic Technical Corps which was subsequently re-named the Special Technical Corps.(1) At first, enlistment was restricted to technical artisans, but it was later extended to practically all civilian trades. Recruits who were enlisted before August 1941 were liable for local service only, but those who enlisted after that date were liable for duty overseas in order to provide against the necessity to post them for service in Burma. When Singapore surrendered in February 1942, many of the personnel dispersed to their own homes, others went to Java with the Royal Air Force while others were captured and interned.(2)

The Work of the Overseas Manpower Committee

The general shortage of manpower in the United Kingdom by the autumn of 1941 was such that it was imperative to consider most seriously an extension of the arrangements for recruiting from overseas. So far, there was no scheme for the entry of men for semi-skilled and unskilled trades or for that of volunteers for the Women's Services. In order to examine the position, a committee, known as the Overseas Manpower Committee, was set up late in 1941 under the chairmanship of a representative of the Ministry of Labour and National Service. Its terms of reference were:

> 'To consider and deal with any matter brought before the committee by a Government Department concerned relating to the transfer for service or employment of persons from one country to another, excluding questions relating to technical personnel of professional or approximately professional standards.
>
> The committee's functions will include the co-ordination and placing in priority order of requests by United Kingdom Government Departments for the provision of manpower from overseas.'(3)

As a result of the committee's investigations, the scope of overseas recruiting was considerably widened in February 1942. Men then became eligible for enlistment for the following types of service in the Royal Air Force:-

Officers - (a) In the General Duties Branch.

(b) In the Technical Branch.

(c) In the Administrative and Special Duties Branch.

(There was no longer any marriage bar on any type of candidate - previously only unmarried men had been eligible for the A and S.D. Branch)

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(1) A.M. File A. 947144/47.
(2) A.H.B./III/32/1.
(3) O.M.P. (41) 1, 29 October 1941.

Other ranks - (a) Candidates for training as members of aircrew.

(b) Tradesmen for all Group I trades.

(c) For trade training in certain Group II, Group III and Group M trades.

W.A.A.F. - Women with the necessary qualifications could be accepted for employment in the following duties:- Administrative; Clerk, S.D.; Radio Operator; Meteorologist.

Under these new arrangements a volunteer who was technically an alien, but who was not of British nationality only as a result of the failure of his parents to register his birth at a British Consulate, was regarded as a British subject.(1)

The Registration of British Subjects Overseas

An Act of Parliament passed in August 1942 made British subjects resident in foreign countries liable for military service on the same terms as British subjects resident in the United Kingdom.(2) The results of this Act were negligible, however, as few British subjects of military age were unable to show that they would be of more value to the common cause if they were left in their civilian employment than if they were conscripted into one of the Services.

British subjects resident in the United States of America who were required to register under the United States Selective Service arrangements had the right to opt for service in the Royal Air Force and, if found fit and suitable by a Consul or Air Attache, came under the general arrangements of the Overseas Manpower Committee scheme. British subjects who were serving in the United States Armed Forces and who wished to transfer to the Royal Air Force were similarly dealt with. Those who wished to train for aircrew duties proceeded to Canada for final selection and, if accepted, were then attested in the R.A.F. and trained in Canada. The response to the call to men to transfer to the British Forces was disappointing, however, probably because British scales of pay and allowances were meagre in relation to American standards.

The Bahamas Air Service Squadron

The Officer Commanding the R.A.F. station at Nassau proposed in September 1942 that local Bahamians should be enlisted into the Royal Air Force in order to economise in the use of United Kingdom airmen. It was recommended that the Bahamas Air Service Squadron should be formed and organised on the lines of a Works Squadron. Enlistment was to be controlled by a local board, all volunteers serving one month before their enlistment was confirmed. Enlistment was for the duration of the emergency and for service in any part of the world.

After consulting the interested Government Departments, the Air Ministry gave permission for enlistment to begin in

(1) O.M.P. (42) 11, February 1942.
(2) National Service (Foreign Countries) Act, 1942. Ch. 30. 5 & 6 Geo. VI.

March 1943. The Officer Commanding R.A.F., Nassau, was authorised to recruit up to an establishment of 256, plus 25 per cent to cover men under training, and was encouraged to extend substitution to the maximum extent. No definite limitation was laid down as to the trades in which recruits might be enlisted, except that all locally enlisted airmen were eventually to be absorbed within the approved establishment of the R.A.F. Station at Nassau.

Recruiting proved to be less successful than had been hoped, the main reason being the high wages that were offered to men willing to take up work in the United States. It was then proposed to lower the age for enlistment and to recruit youths aged 16-18 for training in semi-skilled trades for local service, but this proposal was turned down. By April 1945 the strength of the B.A.S.S. was only 22 tradesman and 275 unskilled men. Few of the latter could be trusted to carry out even menial tasks satisfactorily and, in view of the changed requirements of the R.A.F., the squadron was disbanded in August 1945.

The Mauritius Volunteer Air Force (Marine Craft Section)

The formation of the Mauritius Volunteer Air Force (Marine Craft Section) was proposed in April 1943 in order to assist in flying boat operations based on the island. Its formation was approved in principle in June 1943 but the draft instructions for the force were not approved finally until April 1945, owing to protracted arguments as to whether the section was a military or civil organisation. In April 1945, the strength was 37, together with 14 Army signallers attached to the Marine Craft Section.(1)

The West African Air Corps

The Inspector General of the Royal Air Force reported in the autumn of 1942 that the R.A.F. was not using native manpower to a sufficient extent in West Africa, and the Director General of Manning therefore sent a mission to West Africa to examine the situation.(2) At the time of the mission's visit in April 1943, some 7,500 West Africans were employed as civilians by R.A.F. units and at least 1,200 of these were estimated to be in direct substitution for British airmen. The mission recommended that West Africans should be employed as enlisted personnel in a properly constituted force, to be known as the West African Air Corps. The scheme was opposed by the Army who feared its effect on recruitment, particularly of literate Africans, for the Royal West African Frontier Force.(3) It was eventually agreed that, apart from the men whom the R.A.F. had employed as civilians, the R.A.F. could enlist any additional illiterates who were required, but that the recruitment of literate Africans should be limited to 100 per month.(4) This restriction on the recruitment of literates was lifted in April 1944.

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(1) A.H.B./III/32/1.
(2) A.M. File S.91855.
(3) The Army was aiming to expand the R.W.A.F.F. to about 200,000 men, including 40,000 trained tradesmen.
(4) 'African Diary' (Personal diary of Grp. Cpt. Muschamp).

Army opposition having been overcome, the West African Air Corps was formed in January 1944, and consisted of four units raised under local ordinance in the four West African colonies of Nigeria, Gold Coast, Sierra Leone and Gambia. The organisation of the Force was complicated by the immense distances between the territories, by the differences of race and of the standard of intelligence and education.

The West African Air Corps was placed under the jurisdiction of the Air Council, and the enlistment and training of recruits began in February 1944. The number of recruits whom it was hoped to enlist was at first limited to 6,600, of whom, it was hoped, some 3,600 would be in substitution for 2,400 Royal Air Force airmen, and 3,000 would be recruited from among or in place of the men who were already being employed as civilians. The terms of enlistment were for the 'duration of the present emergency' in any part of the world, although the Air Ministry did not contemplate using West Africans outside West Africa. No difficulty was experienced in finding suitable recruits, and the Corps reached its peak strength of nearly 5,000 in December 1944. Although voluntary enlistments were the general rule, conscription had to be resorted to on several occasions in Gambia where there was little inducement to literate Africans to enlist on account of the high wages which were paid to them as civilians.

Training facilities for the West African Air Corps were provided not only by the R.A.F. but also by the Gold Coast Police in the case of the West African Air Corps Police, and by the Army in certain trades which were analogous to R.W.A.F.F. trades, such as Clerk, M.T. Mechanic and Electrician.(1) The Army also assisted by the loan and installation of equipment for the training of wireless operators. The two principal West African Air Corps schools were opened at Takoradi in the Gold Coast and Oshodi in Nigeria. Recruit and training depots were also opened in Accra on the Gold Coast, Jui in Sierra Leone and Bathurst in Gambia. The West African Air Corps trades and trade qualifications were a compromise between those of the R.A.F. and the R.W.A.F.F.(2), and the trade groups and rates of pay were similar to those of the R.W.A.F.F.(3) The best training results were obtained in the trades of wireless operator, M.T. mechanic, motor boat crew and clerk. Training was severely handicapped by the large numbers of African airmen whose knowledge of English was so elementary that Service training was wasted until education officers and African teachers had improved their general educational standard. The

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(1) A.H.B./III/32/1.

(2) W.A.A.C. trade groups and trades were as follows:-
Group A - Clerk Special, Dispenser, Draughtsman, Fitter Aircraft, Instrument Repairer, Wireless Operator Mechanic.
Group B - Armourer, Blacksmith, Carpenter, Clerk G.D., Clerk Pay Acctg., Clerk Stores Acctg., Clerk Storeman, Coppersmith, Coxswain, Driver M.T., Electrician, Mech. Aircraft Engine, Mech. Airframe, Mechanic M.T., Mechanic Marine, Medical Orderly, Shoemaker, Tailor, Wireless Operator, Fabric Worker, Telephonist, Turner.
Group C - Cook, Mate, Motor Boat Crew, Security Police, Storeman, Armourer Assistant.
Group D - Airman Non-trade, Barber, Batman, Fire Fighter, Orderly, Police, Waiter.

(3) West African Air Corps - Standing Orders.

low standard of education in the Gambia and Sierra Leone made it necessary to post West African Air Corps airmen from the Gold Coast and Nigeria to those Colonies, which was most unpopular.

The West African Air Corps represented the first attempt by the Royal Air Force to employ native labour in a properly constituted corps, and several important lessons emerged from the experiment. The main lessons concerned the necessity for giving officers in charge of native airmen special training in order that they might understand the outlook of native airmen and appreciate the difficulties which they had to encounter and overcome in speech and general education. Experience showed that native airmen required far more training and supervision than white men owing to their limited technical sense and initiative. Nevertheless, the success of the West African Air Corps indicated the undesirability of sending white airmen to the unhealthy climate of West Africa to perform unskilled or semi-skilled tasks which could be done equally well by the native population at half the cost. The value of the West African Air Corps to the Royal Air Force is difficult to assess. Had the scheme been started two years or even one year earlier, it would certainly have paid good dividends. When hostilities in North Africa came to an end in 1943, however, the Armed Forces in Africa were reduced and the need for local labour declined, so that it is doubtful whether the Royal Air Force really gained much from the West African Air Corps, recruiting for which did not begin until February 1944. On the other hand, from the point of view of the Colonies, the formation of the West African Air Corps was well worth while, for the trades in which the Africans were trained were such as would stand them in good stead when they left the Service.

The Recruitment of West Indians for Trade Training

Consideration was given in the spring of 1944 to the possibility of recruiting West Indians for trade training in the Royal Air Force.(1) Such a scheme would be an extension of the recruiting scheme which had been in operation in the West Indies since August 1940 with the difference that enlistment would be effected locally prior to embarkation.(2) The Governors of the West Indian Colonies estimated that the numbers of recruits likely to be forthcoming during the first

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(1) It was hoped to recruit men for training in the following trades:-
Group I - Draughtsman, Fitter II (including Fitter Armourer and Fitter Torpedo), Fitter Marine, Fitter Stationary Engine, R.D.F./W/Mechanic.
Group II - Armourer, Blacksmith & Welder, Carpenter, Coppersmith & Sheet Metal Worker, Draughtsman (Cartographical), Electrician II, Flight Mechanics A & B, Instrument Repairer II, Plant Operator, R.D.F. Operator, Wireless Operator.
Group III - Cook, Drainlayer, Motor Boat Crew.
Group IV - Clerk Accounting, Clerk G.D., Equipment Assistant, Teleprinter Operator.
Group V - A.C.H/G.D., Armament Assistant, Maintenance Assistant, Motor Cyclist, Packer, Telephonist, Works Hand.
Group M - Dental Clerk Orderly, Dental Mechanic, Medical Orderly. (A.M. File S.95157).

(2) A.M. File S.89398, Part I.

six months of a call for volunteers would be approximately 2,000, and the Air Ministry considered this sufficiently encouraging to warrant a recruiting scheme being put into operation.

Recruiting opened in September 1943, the numbers of men enlisting being well up to expectations. They were enlisted on 'duration of emergency' engagements. The shortage of shipping proved to be the greatest stumbling block in the scheme, and, until May 1944, only very small batches of recruits could be despatched to the United Kingdom at any one time. The first large draft reached Britain in June 1944.(1) All West Indian recruits were vetted by the R.A.F. Central Trade Test Board on their arrival in the United Kingdom in order to ensure their suitability for training in the trades in which they were mustered on enlistment. In addition, remustering to other trades was necessary in a number of cases in order to bring recruits into line with the requirements of the R.A.F. main recruiting programme at the time of their arrival in the United Kingdom. This remustering unfortunately caused some discontent among the recruits.

As a result of discussions between the Air Ministry and the Colonial Office, it was decided in July 1944 to recruit, when the current programme for the entry of 3,000 trade trainees was complete, an additional 5,000 West Indian ground staff for employment as aircrafthands(G.D.). In order that an early start to the recruitment of aircrafthands could be made and continue uninterruptedly, it was intended that the first 1,000 should be recruited exclusively from Jamaica where an experienced recruiting and preliminary training organisation already existed.

Although the early drafts were of excellent character and efficient in their work, the scheme to recruit West Indians for ground duties, was, on the whole, not a great success. This was due to the fact that later drafts consisted mainly of men who were not amenable to discipline. Owing to changed manpower needs, the commitment of 5,000 men for aircrafthand duties was never completed. By March 1945, when recruiting was stopped, some 5,500 West Indians had been recruited for ground duties and were serving in the United Kingdom.(2) Of these, 2,700 were tradesmen.

At an Air Council meeting in December 1945(3) it was decided that the West Indians in the United Kingdom, who had

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(1) A.M. File S.95157.

(2) The contribution by Colonies was as follows:-

Jamaica	4,628	
British Guiana	419	
Trinidad	240	
Barbados	176	
Antigua	21	
British Honduras	21	
Grenada	16	
St. Vincent	2	Total 5,523

No men from the Bahamas were recruited under this scheme as there was already in existence the Bahamas Air Service Squadron which needed all available recruits.
(A.H.B./III/32/1).

(3) A.C. Mtg. 11(45).

been recruited for ground duties, should be demobilised forthwith.

The Ceylon Air Defence Corps

The Air Council approved, in January 1944, proposals for the formation of a Ceylon Air Defence Corps. The proposals envisaged the substitution of English-speaking Ceylonese(1) for United Kingdom airmen in 20 per cent of the establishment of the static units in Ceylon and also of one Balloon Squadron by the local recruitment of 1,000 tradesmen and 560 aircrafthands. It was also intended to enrol some 1,500 additional men as followers for domestic duties. All recruits were to be enlisted for local service with the option of volunteering for service elsewhere. Posting to India was, however, excluded in view of the Indian Government's fear of repercussions among Indian Forces with inferior conditions of service.

In May 1945, the Governor of Ceylon recommended abandoning the plan for the Ceylon Air Defence Corps as the immediate danger to Ceylon from the Japanese had by then disappeared. The Air Ministry subsequently agreed to this, although the Ceylon Air Defence Corps had been formally constituted by Defence Regulations published in Ceylon in the Gazette on 6 October 1944, no men were ever enlisted in it on account of the various difficulties which had had to be overcome before recruiting could be opened.

The End of the Recruitment of British Subjects Overseas

The recruitment of candidates for aircrew duties ceased in the Colonial territories in May 1944 owing to the large surplus of aircrew which already existed. This suspension of aircrew recruiting was extended to British subjects resident in foreign countries in August 1944.(2)

Canadian Initial Training School facilities for Newfoundlanders came to an end in October 1944 when Canada ceased to recruit men for aircrew training. The recruitment of Newfoundland personnel had already been suspended but there remained in Canada, awaiting initial training, a few recruits whose future had to be decided. They were given the option of remustering for ground duties in the Royal Air Force or of being discharged in order to enlist in another branch of His Majesty's Forces. Those who were unwilling to accept either alternative were discharged and repatriated.

Overseas volunteers for ground duties in the Royal Air Force were not accepted after the beginning of 1945 except in the case of volunteers enlisted in the West Indies where recruitment remained open until the end of March 1945.(3)

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(1) The term 'Ceylonese' includes Sinhalese (original inhabitants) as well as Tamils, Europeans, Burghers (Dutch) and Malayans (descendants of a British Malay Regiment once stationed there).
(2) A.M. File S.69081.
(3) A.H.B./III/32/1.

Limiting Factors in the Use of Colonial Manpower

Except in the case of Colonial subjects of European descent, there were a number of factors which limited the use of Colonial personnel. The chief of these was their colour which put innumerable checks on the organisation and employment of the enormous manpower resources of the Colonial Empire. In fact, coloured Colonial airmen could, in general, be employed only in the United Kingdom or in their own lands. The attitude of United States white servicemen and of certain of the Dominion Forces precluded their employment in R.A.F. Overseas Commands and, in the case of aircrew, in Transport Command. Nor could Indians be posted to India unless they were accepted for transfer to the Indian Air Force.(1) South Africa, Southern Rhodesia and West Africa were banned to coloured personnel although the possibility of coloured members of aircrew arriving in West Africa for short stays with patrol aircraft, etc., was accepted. Canada was banned to coloured personnel except for aircrew trainees who had to go to Royal Air Force schools. These restrictions imposed on the passing of coloured airmen caused a number of irreconcilable difficulties:-

(a) Broadly speaking, coloured airmen could only serve in the United Kingdom.

(b) Individuals often complained of the rigours of the climate of the United Kingdom and asked for postings to a country where the climate was less severe.

(c) Individuals who were members of crews had to be withdrawn and crews broken up at the last moment when a squadron, or the aircraft of which they formed a part of the crew, was ordered overseas. It was contrary to policy to break up crews.

In addition to the restriction of posting of coloured airmen to units in the United Kingdom, which was itself complicated by the presence of members of the Women's Auxiliary Air Force on a number of stations, the chief impediments in the use of Colonial manpower during the war were:-

(a) The late start in raising Colonial Forces for the R.A.F.

(b) Inexperience in their recruitment and control.

(c) The inaccessability of some of the sources of manpower, coupled with transport difficulties.

(d) The low standard of education and/or physique of the peoples in some areas, which precluded their use by a highly technical Service except in menial capacities.

The Recruitment of Aliens into the Royal Air Force

Regulations concerning the Enlistment of Aliens

The pre-war regulations concerning the nationality of Royal Air Force personnel, which were made under the authority

(1) A.M. File S.93843.

of the Air Force (Constitution) Act, 1917, originally required that entrants to the regular and non-regular air forces in commissioned or non-commissioned rank should be:-

(a) British nationals themselves, and

(b) the sons of parents both of whom are (or, if deceased, were, at the time of death) British subjects.

In addition, the regulations provided that the possession of foreign as well as British nationality might, in certain circumstances, render the candidate ineligible. The strict application of (b) above produced a number of hard cases and in 1936 it was decided to qualify the rule by invoking Section 95 of the Air Force Act which provided that exceptions might be made on the authority of the Secretary of State. The Military Training Act of 1939 rendered all male British subjects of the specified age, who were ordinarily resident in Great Britain, liable to be called on for military service, regardless of their parents' nationality or of dual nationality.

The peace time nationality regulations in regard to enlistment in the Royal Air Force were waived on 28 September 1939 by an Order in Council(1), published under the Emergency Powers Act. It provided that:-

(a) An alien may hold a commission or he may be enlisted or entered in any of His Majesty's Forces as if he were a British subject.

(b) There shall be no limit to the number of aliens who may serve together at any one time in any Corps or Unit.

Recruiting instructions that were issued in October 1939 specified that the only aliens who could be accepted in the Royal Air Force were aircrew volunteers and skilled tradesmen. Special attention was to be paid to the security aspect in regard to volunteers who were of enemy alien origin. French nationals were not to be accepted. With the exception of Polish nationals, no volunteer was to be accepted unless he could speak English fluently.(2)

The question soon arose as to whether aliens enlisted in the British Armed Forces should take an oath of allegiance to the British Crown. The position of Polish subjects was clarified in December 1939 by a decision that they should take a double oath of allegiance - one to his Majesty the King and another to the Polish Republic. In August 1940 the insistence on an oath of allegiance to the British Crown was waived in the case of United States citizens volunteering for service in the British Forces. This concession was later extended to other aliens who might have been placed in a position of divided loyalty if they had had to take the oath to His Majesty.

The Organisation and Disposal of Allied Air Force Personnel

After the collapse of France in the summer of 1940, large numbers of Polish, Czech, Norwegian, Dutch and Belgian nationals

(1) Defence (Armed Forces) Regulations 1939, No. 1304.
(2) A.M. File A.32276/39.

made their way to the United Kingdom with the object of carrying on the war in the air. It then became necessary to decide how these officers and airmen should be organised and disposed of. The French, under General de Gaulle, were forming their own Air Force, which would eventually go to their Colonial possessions. In the meantime, it was agreed that the R.A.F. could use their trained pilots where possible. The Dutch Naval Air Service was working with Coastal Command by the middle of July 1940. The Norwegians would be absorbed into the Empire Air Training Scheme in Canada. There were few Belgians, and it was proposed to absorb their fighter pilots into fighter squadrons in the United Kingdom. The Chief of the Air Staff approved the formation of four Polish and two Czech squadrons in the R.A.F. and it was proposed that other Allied squadrons should be formed as soon as possible.(1) By November 1940 there were nine Polish and three Czech squadrons in addition to 150 Allied pilots serving in R.A.F. squadrons.(2)

Legislation concerning Allied Air Force Personnel

The Allied Governments which were set up in the United Kingdom during the summer of 1940 were given a degree of control over their forces in the United Kingdom by the enactment of the Allied Forces Act of August 1940. This Act gave the Allied naval, military and air force authorities the right to exercise over their forces in the United Kingdom, in matters concerning discipline and internal administration, all such powers as were conferred upon them by their own laws.

The Allied Governments in the United Kingdom then called up their nationals of military age under their own military law for service in their reconstituted national forces. The Governments concerned, however, had no power to enforce these call-up notices and a number of Allied nationals refused to enlist in their national forces. Some Poles and Czechs genuinely felt that their Provisional Governments had no legal jurisdiction over them, and many applied to join the Royal Air Force in preference to their own forces. Each of these cases was reviewed and an applicant was accepted into the R.A.F. on obtaining a certificate of exemption from military service with his own forces.(3)

Although many Allied personnel had genuine reasons for not wishing to serve in their national forces, others claimed 'minority' status in an attempt to avoid their legitimate obligations. As the conscription laws of the Allied nations could not be enforced in the United Kingdom and since the United Kingdom National Service Acts applied only to British subjects, it seemed that these allied nationals could escape altogether.(4) This difficulty was overcome with the passage of the Allied Powers (War Service) Act of August 1942 which empowered the King to issue Orders to Council extending the application of the National Service Acts to Allied personnel resident in the United Kingdom, who were of military age but who had not joined their own forces.

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(1) Bomber Cmd. File S.24111.
(2) W.P. (40)447.
(3) A.M. File S.69081.
(4) A.M. File C.S. 10422.

The Recruitment of Aliens Overseas

Although the great majority of the Allied personnel who served with the Royal Air Force were recruited in Britain, enlistment was by no means confined to the United Kingdom area. Many Norwegians, Poles and Frenchmen were recruited in Canada. A Polish Air Force Mission was set up in Canada in the summer of 1941 with the purpose of recruiting Polish nationals in Canada and the United States of America for both aircrew and ground duties. Some 1,500 Poles from Russia joined the Polish Air Force in the latter half of 1941, and several thousands of Polish Army personnel in the Middle East were transferred to the Polish Air Force. Considerable numbers of Greeks and Yugoslavs were recruited in the Middle East.

The Training of Allied and Neutral Personnel

Provision for the training of Allied and neutral personnel had to be made as soon as war broke out, and as early as December 1939 a Polish Training Unit was formed. A Royal Air Force Franco-Belgian Flying Training School was opened in October 1940. Polish pilots received all their training in the United Kingdom while Greek and Yugoslav aircrew candidates were trained in Southern Rhodesia. Other Allied personnel received their basic training mainly in the United Kingdom or Canada, and received their operational training in the United Kingdom, Canada, the Bahamas or the Middle East. The Norwegians assumed the responsibility for the earlier training of their nationals. Wireless, gunnery and technical training was given almost entirely in the United Kingdom.(1)

In addition to the normal flying or technical training, instruction in the English language had to be given to large numbers of the aliens serving in the Royal Air Force. In a number of training schools, it was possible to arrange for some organised instruction in basic English to be included in all syllabi. Teaching those who did not naturally speak English required a special technique, and it was impressed upon instructors that more imagination was necessary in instructing foreign trainees than was required for teaching British pupils.(2)

The End of the Recruitment of Allied Nationals

The Air Ministry announced their intention, in October 1944, of stopping the recruitment of Allied personnel, and in the following month, the Allied Governments were asked to restrict the recruitment of their nationals everywhere to such numbers as could be absorbed into training immediately, or were needed to make good deficiencies in authorised strengths. The Polish authorities were urged to stop recruiting altogether in North America because the Air Ministry were being pressed to accept a large number of Poles who had become available in Europe.(3)

Allied and neutral nationals served in all operational Commands and in all theatres of war. Although their numbers

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(1) C.O.S. (43) 195.
(2) C.O.S. (43) 126.
(3) A.M. File S.69081.

were small in comparison with the overall strength of the Royal Air Force they provided a valuable addition of keen and, in many cases, already trained men. At the beginning of May 1945, there were approximately 29,800 allied and neutral personnel serving in or with the R.A.F.(1) As with Colonial personnel, so with the Allied nationals, there were certain complications to be overcome in their training and employment. These were caused mainly by language difficulties and by differences of temperament and mental outlook.

United States Assistance in Meeting Royal Air Force Personnel Deficiencies

Although there was no shortage of volunteers for aircrew training in the United Kingdom during the first year of the war, the supply of ready trained and experienced pilots was soon absorbed, and there was a serious bottleneck in the aircrew training machine. The short term solution to this difficulty was the recruitment of experienced pilots from outside the United Kingdom. The United States of America were the largest potential source of supply, and steps were taken in the summer of 1940 to recruit American personnel for the Royal Air Force. Arrangements were made in June for American pilots who volunteered to serve with the Royal Air Force to be recruited, medically examined and selected in Canada. If they were considered suitable, they were brought to the United Kingdom and commissioned in the Royal Air Force Volunteer Reserve. After August 1940 American volunteers were not required to take an oath of allegiance to the British Crown.

The American Eagle Squadrons

The first Eagle Squadron, composed entirely of American pilots, was formed as No. 71 Squadron, Royal Air Force, in September 1940.(2) The first group of pilots to enter the squadron had already seen service in France, where it had been intended to form another 'Escadrille Lafayette' on the model of the original of that name which had been formed in 1916. The first volunteers sailed from the United States for France in April 1940 and, when France surrendered, six of them made their way to England. In July of that year, they requested the Air Ministry to authorise the formation of an American squadron in the Royal Air Force. Because only a few pilots would be available for service immediately, the Air Ministry hesitated at first, but finally agreed to authorise the formation of such a squadron if its founders could guarantee to furnish a continuing supply of personnel. Thus, the first Eagle Squadron was formed in September 1940. Many United States citizens already serving in the R.A.F. as pilots were transferred to it. Later, as the numbers grew, two other Eagle Squadrons (Nos. 121 and 133) were formed.(3) All three were fighter squadrons, and all were handed over to the United States Army Air Corps on 29 September 1942.

In order to ensure a flow of volunteers for the Eagle Squadron, a scheme was evolved in October 1940 for giving refresher courses to United States citizens who volunteered for

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(1) R.A.F. Personnel Statistics.
(2) A.H.B./IIM/E71/1/1.
(3) A.H.B./IIM/E121/1 and IIM/E133/1.

service with the Royal Air Force. Acceptance for the refresher course was restricted to volunteers who were qualified pilots with more than 80 hours flying experience. They signed on nominally to serve with a 'flying concern' known as 'British Aviation Limited', on the understanding that they would enlist in the R.A.F. when they arrived in the United Kingdom. Volunteers recruited under this scheme underwent a refresher flying course at a civilian operated school in the United States before proceeding to the United Kingdom via Canada. The scheme came into operation early in 1941, but it was not an unqualified success. The main difficulties with which it had to contend were the lack of training aircraft available, the fact that the neutrality law forbade publicity being given to the scheme, and the inability to ensure that pilots would be allowed to leave the United States on the completion of their training.(1) These refresher courses, together with any flow of trained recruits, came to an end on the entry of the United States into the war in December 1941.

The Civilian Technical Corps

The Air Ministry made enquiries in the autumn of 1940 concerning the possibility of recruiting some 4,000 radar personnel in the United States of America for service with the Royal Air Force.(2) These enquiries revealed that, in order to attract suitable recruits in sufficient numbers, so much organisation would be required that it would only be justified if recruitment for other categories of technicians could be carried out at the same time. At a meeting held in February 1941, the Air Council approved in principle the recruitment in the United States of aircrew volunteers and certain classes of technicians.(3)

Consequently, it was proposed to the United States authorities that, in order to meet the anticipated shortage of technical personnel in the British Armed Forces in the latter half of 1941, skilled American technicians should be invited to proceed to Canada for enlistment in the Royal Canadian Air Force.(4) The United States State Department decided, however, that the publicity which would be necessary to attract the estimated requirements of men (about 30,000) would be inconsistent with United States neutrality. As an alternative, they suggested that an invitation should be extended to American citizens in the United States to enrol in a civilian corps of technical personnel to be employed overseas on maintenance work for the British Armed Forces, provided such personnel were not called upon to undertake combatant duties or be subject to military discipline.(5)

This American suggestion was accepted, and the proposal to form the Civilian Technical Corps was approved by the War Cabinet in April 1941. Recruiting began in June 1941. The Air Ministry hoped that many of the men who volunteered for service in the Civilian Technical Corps would, when they had

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(1) The United States Selective Service Act had been passed in 1940.
(2) A.M. File S.69081.
(3) A.C.P. 11(41).
(4) A.M. File S.82486.
(5) A.C. Mtg. 7(41).

passed beyond the boundaries of the United States, volunteer for enlistment in the Royal Air Force.(1) The conditions of service laid down for the Civilian Technical Corps were designed to attract a good type of American craftsman, and the rates of pay were related to those of the Royal Canadian Air Force. Members of the Corps were also provided with free uniform, accommodation and food, and were given entitlement to medical and non-effective benefits on a similar basis to airmen of the Royal Canadian Air Force.

It was clear by the end of July 1941 that the Civilian Technical Corps was not going to be a success. Many undesirables were enrolled and trouble started soon after the arrival of the first draft in the United Kingdom. The two main causes of the scheme's failure were considered to be that the prospective recruits were already employed in good jobs in the United States, and that the employment offered was under a foreign Government rather than under that of the United States. Other, subsidiary, causes of trouble were the difficulty of maintaining discipline in a civilian corps wearing uniform almost identical to that of the Royal Air Force, the careless selection of recruits, and the rates of pay which, although good by English standards, were much too low to attract skilled American craftsmen, especially those who had dependants in the United States.(2)

The need of the Royal Air Force for technical personnel from the United States of America had become rather less urgent by the time that the United States entered into the war in December 1941. This was due mainly to the energetic measures of the Hankey Committee to meet requirements from United Kingdom sources when it became apparent that the Civilian Technical Corps was doomed to failure.

The only real cure for most of the troubles of the Civilian Technical Corps was the repatriation of its members, and the whole scheme was proving so wasteful by the end of 1941 that strong recommendations were made to stop recruiting in its existing form. The entry of the United States into the war had increased the unrest in the Corps, and the general effect had been to add to the number of requests for repatriation from those who felt that they could contribute more to the general war effort in their own country.

When recruiting for the Corps was suspended, a total of 899 volunteers had been enrolled. Of these, 281 had already been repatriated for various reasons, but mainly on account of their unsuitability in regard to technical qualifications. The cost of the Corps during its first year was over £341,000. The United States Government had helped in recruitment, and had allocated $10,000,000 of Lend Lease funds for the purpose of establishing the Civilian Technical Corps.

In a report which he made on the first year's working of the Civilian Technical Corps, the Commandant said:

> 'I consider the Civilian Technical Corps to have been ill-conceived and misbegotten, but the original plan had possibilities, which, if carefully thought out, might

(1) A.M. File S.72837.
(2) A.M. File S.82486.

have helped enormously to improve Anglo-American understanding.... The Corps, up to date, has done considerable harm which might have been avoided, but it is not impossible that this may be outweighed before the war ends by benefits resulting from the close association in workshops and homes between the remnant of the Corps and their British associates."

Although the Civilian Technical Corps proved to be a failure it was, at the time it was conceived, the only means by which manpower assistance could be secured from the greatest populated friendly nation not already actively engaged in the war. The need of the Royal Air Force for trained and experienced technicians was so urgent in the spring of 1941 that any possible source of supply had to be explored and exploited. The potentialities of the Civilian Technical Corps were great, but the weaknesses inherent in the nature and organisation of the Corps proved overwhelming and wrecked the scheme.

Other Forms of Technical Personnel Assistance

While the plan for the Civilian Technical Corps was being evolved and put into effect, other means of giving the Royal Air Force assistance in its quest for technicians were being considered by the United States Government. In January 1941, the Air Ministry listed the help in personnel which they would welcome from the United States during the following months. The list, which was formidable in its scope, called for aircrew, skilled tradesmen, and wireless and radar personnel of officer status.(1) The Civilian Technical Corps was the means chosen for supplying the skilled tradesmen but, as has been shown, it yielded only a few such men and a far greater number of almost unskilled labourers.

The request for wireless and radar technicians of officer status was met in August 1941 when arrangements were completed for the attachment to the Royal Air Force for training and subsequent employment on radar and allied duties of a number of United States university graduates who were to be commissioned in the United States Army Signal Corps and be styled 'Military Observers.' The first batch of 50 arrived in September 1941.

The United States Government agreed in March 1941 to send personnel of the Army Air Corps to the United Kingdom to give advice on the erection, maintenance and repair of American aircraft, with which British technicians were not familiar.(2) The aim was to send, wherever United States aircraft were used, a team consisting of three officers and five N.C.O.s for each type of American aircraft provided. Owing to the delays which often occurred in the delivery of these aircraft, the American technicians sometimes arrived a considerable time before the aircraft which they were to erect and service, with a consequent feeling of frustration and demoralisation on the part of the teams.

(1) A.M. File S.72837.
(2) A.M. File S.72615.

The Legal Position of Americans serving with the British Forces

The United States Government decided in June 1941 that registrants for military service in the United States, who were serving in the Canadian or British Armed Forces or were employed in the Civilian Technical Corps, were to receive indefinite deferment of their obligation to serve in the United States Armed Forces.(1) President Roosevelt declared that it was national policy to lend all possible aid to Britain and Canada, and that any man wishing to join the British or Canadian Armed Forces had a complete right to do so, subject only to the limitations of certain statutes concerning oaths of allegiance to foreign rulers and to the recruitment in the United States for foreign armed forces.

The Entry of the United States into the War

As a result of the entry of the United States of America into the war in December 1941, the whole question of obtaining manpower assistance from America was considerably simplified. It then became possible for the Royal Air Force openly to borrow American officers and airmen for technical or other duties, with no limit on the length of the loan. Many of the United States citizens who had volunteered for and been accepted by the Royal Air Force were transferred to the United States Forces, either individually or, as in the case of the Eagle Squadrons, in an organised body.

The Value of Overseas Manpower Assistance

In relation to the overall strength of the Royal Air Force, the manpower assistance which the Service obtained from non-United Kingdom sources appears to be small. It is not by considering mere numbers, however, that the true value of overseas manpower assistance can be assessed. The strong desire to serve and the high quality of so many of the overseas volunteers were of at least as much value to the Royal Air Force as quantity alone. Moreover, large numbers of these men, especially those belonging to the Allied Air Forces, were trained aircrew or tradesmen already accustomed to Service discipline, and they thus represented a considerable saving of R.A.F. training facilities. Generally speaking, recruitment overseas for aircrew duties was an unqualified success and was well worth the effort involved. The same cannot be said for recruiting for ground trades in view of the setbacks and difficulties encountered in administering the large drafts of West Indians who were brought to the United Kingdom. Neither did the advantages gained from the Civilian Technical Corps compensate for all the disadvantages of the scheme. Quite apart from its value to the Royal Air Force, overseas recruitment was valuable in that it gave to British subjects overseas and to friendly aliens an opportunity for fighting the common enemy, which they might not otherwise have had.

The Air Ministry had to contend with a number of complications in the training and employment of recruits from overseas. The main two were the inability of some recruits to speak and understand the English language, and the prejudices against others on account of their colour and race. These difficulties remained throughout the war. Other difficulties concerning,

(1) A.M. File A.271533/41.

for example, a foreign recruit's position in connection with the laws of his native land were, in many cases, solved by subsequent developments in the war situation.

Although overseas recruiting undoubtedly yielded good results,(1) and Air Ministry could have enjoyed far greater benefits if an earlier start had been made to take advantage of non-United Kingdom manpower. Lack of encouragement, or even active discouragement, during the early months of the war must have deterred a number of keen young men from volunteering at a later stage. This lack of encouragement was not the fault of the Air Ministry but represented the policy laid down by the Government for all three Service Departments. The Air Ministry were slow, however, in making full use of local manpower in the Colonial territories. Many of the Colonial peoples were certainly too primitive to be of much use in a highly technical Service, and the populations of many areas were debarred by inaccessability or lack of transport facilities, but the Army managed to make a much more comprehensive use of Colonial manpower than did the Royal Air Force. The R.A.F. had practically no pre-war organisation for recruiting of this type, and had to start more or less from scratch during the war. Nevertheless, the Air Ministry and Ministry of Labour overseas recruiting schemes were the means of producing a most valuable manpower contribution to The Royal Air Force right up to the end of the war.

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(1) See Appendix 6 for details of Colonial personnel serving in the R.A.F. in February 1945.

CHAPTER 11

PRE-ENTRY TRAINING FOR THE ROYAL AIR FORCE

There existed, during the years immediately preceding the outbreak of war in September 1939, three organisations whose purpose was to provide pre-entry training for boys and young men of school and university age, who were interested in air matters and wished to be associated with the Royal Air Force. These three organisations, which, between them catered for all sections of the community, were the University Air Squadrons, the Air Sections of the Officers' Training Corps and the Air Defence Cadet Corps.

The University Air Squadrons

The University Air Squadrons, the first two of which were formed at Oxford and Cambridge in the autumn of 1925, represented the initiation of the Royal Air Force into the field of pre-entry training. The purpose of the squadrons was to increase the flow of candidates for commissions in the regular Air Force, the Air Force Reserve and the Auxiliary Air Force, to stimulate interest in air matters and to promote liaison between the Royal Air Force and the Universities in technical and research problems affecting aviation.

All these objects were achieved, and increasing numbers of graduates were encouraged, through the University Air Squadrons, to take up a career in the Royal Air Force. Members of the squadrons were enrolled from undergraduates who, until early in 1939 when they had to give an undertaking to join the Royal Air Force Volunteer Reserve on obtaining their certificate of proficiency, were under no obligation for Royal Air Force service.(1) Membership of the squadrons had grown from the original figure of 25 to 75 by 1927, during which flying training in term time was permitted for the first time. The London University Air Squadron was formed in 1935, and all three squadrons were then permitted to carry, in addition to the sanctioned 75, men who were in their last academic year and had been recommended for a commission in the Royal Air Force.

With the enactment of the Military Training Bill in May 1939, members of the University Air Squadrons, who were in the affected age group and had obtained their proficiency certificate, were at once commissioned in the Royal Air Force Volunteer Reserve if they had joined before 27 April 1939. Those who had joined before that date but had not obtained their proficiency certificate were enlisted into the R.A.F.V.R. as sergeants with the promise of a commission when they were qualified.

The post of Commanding Officer of each of the University Air Squadrons was held by a regular Air Force officer, and regular airmen were attached to the squadrons to maintain the aircraft. Instruction was given in ground subjects and elementary flying. This training was carried out during term time and at camps held at Royal Air Force units during the summer vacation. The squadrons were administered by the Air Ministry and the cost of administration was borne by Air Votes.

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(1) A.M. File 915400/39.

The Air Sections of the Officers' Training Corps

By September 1939 Air Sections of the Officers' Training Corps were in existence at a number of schools, the first of them having been formed in 1938. Membership of the Air Sections was confined to cadets of the Officers' Training Corps who had obtained the Army Certificate 'A' and then wished to specialise in air matters. Training was given in air subjects and members attended camps at Royal Air Force units. They were permitted to fly as passengers. The Air Sections were officered in the main by school masters who were appointed to commissions in the Royal Air Force Volunteer Reserve. The Sections were administered by the Officers' Training Corps authorities under the supervision of the War Office, the Air Ministry being responsible for advising on all training and personnel matters. Certain financial adjustments were also made. The Air Sections, like the rest of the Officers' Training Corps, were financed on the basis that not more than half the essential cost was chargeable to public funds.(1)

The Air Defence Cadet Corps

The Air Defence Cadet Corps was formed in 1938 by the Air League of the British Empire, by whom it was also sponsored. The Corps was designed to bring youths aged between 14 and 18 years into touch with aviation, to form a reservoir of man-power for both civil and Service aviation, and to stimulate recruiting for the Royal Air Force.(2) By the end of 1938, thirty-seven Air Defence Cadet Corps squadrons had been formed(3) and by the autumn of 1939, one hundred and thirty-three squadrons were officially recognised by the Air Ministry. Some of these squadrons were school units, but the majority of them were organised on a local basis, although these latter sometimes contained school flights. Training consisted, in the main, of ground instruction given on unit premises, but each squadron was affiliated to an R.A.F. or A.A.F. unit to which visits were made whenever possible. Provision was also made for the issue on loan of R.A.F. equipment.

The Air Defence Cadet Corps was administered by a Council, which was closely associated with the Air League of the British Empire, through local committees. Until February 1941, when the cadets were incorporated into the Air Training Corps, the cost of the Air Defence Cadet Corps was borne by the Air League or the local committees, subject to the payment by the Air Ministry of a capitation fee of 3/6 for each efficient cadet.

Pre-Entry Training during the First Year of the War

Pre-entry training for the Royal Air Force, far from undergoing a rapid expansion on the outbreak of war, was seriously curtailed during the first months of the war. The University Air Squadrons were completely closed down, because of the impossibility of providing flying training for members in war time,(4) and the instructors and aircraft were then diverted to the training of R.A.F. recruits. The assistance

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(1) A.C.P. 44(44).
(2) A.M. File 718972/37.
(3) Hansard Vol. 342 p.1,978.
(4) A.M. File A.118950/40.

which it was possible for Royal Air Force units to give Air Sections of the Officers' Training Corps and the Air Defence Cadet Corps was also materially reduced.

The first wartime attempt to encourage volunteers for aircrew duties to improve their educational standard by undertaking pre-entry educational training was made in the spring of 1940. It was already being found that many applicants for aircrew duties, who possessed the necessary physique, character and spirit, were being rejected by the Aviation Candidates Selection Board because their lack of education would have made it impossible for them to absorb their aircrew training and instruction. It was decided, therefore, in May 1940 that a candidate for pilot or observer duties whose weakness in mathematics alone prevented his acceptance for training for those duties could, if he wished, be attested forthwith for training as wireless operator (air gunner) and be placed on deferred service for six months. During that time, he was to make every effort, by means of private tuition, to attain the required standard in mathematics. At the end of the six months, he would be called for re-examination and, if his mathematics were found to be up to the required level, he would then be remustered to pilot or observer under training. Otherwise, he would proceed for training as wireless operator (air gunner).

This represented the sole attempt by the Air Ministry during the first year of the war to augment the numbers of men acceptable for aircrew training by encouraging them to raise their educational level before entering the Service. During the succeeding years, aircrew requirements rose appreciably while the nation's resources of suitable manpower to meet the demands continued to fall. As a result, more comprehensive schemes for raising the educational and physical standards of aircrew volunteers had to be introduced. Other schemes for pre-entry training were introduced with a view to increasing the supply of high-grade technicians, of whom there was also a growing scarcity. The three main media of these pre-entry schemes were the Universities, the Air Training Corps and the Local Education Authorities.

Pre-Entry Training at the Universities

The position of the University Air Squadrons, which had been closed down on the outbreak of war, was reviewed in October 1940. It was 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. Two important departures from pre-war practice were made: first, the training given was to be ground training only, and second, an air squadron was to be opened at every University and University College where the response justified it. It was agreed that the minimum number of members warranting the formation of a squadron should be fifty.(1)

(1) A.M. File A.118950/40.

The Oxford and Cambridge University Air Squadrons were re-formed in October 1940. Air Squadrons were formed at eight other universities in January 1941 and at another five in February 1941. By the end of the summer of 1941, twenty-three University Air Squadrons were in existence. Several of these squadrons also established flights in local Teachers' Training Colleges, a development which proved a great success. When the Air Training Corps was formed in February 1941, the existing University Air Squadrons were incorporated in it, as were the squadrons which were formed later, but the Air squadrons continued to be administered separately until October 1942 when they were placed under the command of the Commandants of the Air Training Corps.(1)

The syllabus covered in the University Air Squadron was the same as that of the Initial Training Wings of the Royal Air Force. A cadet who obtained an air squadron proficiency certificate was excused the two months at an Initial Training Wing and, at the end of his air squadron course was posted almost at once to his Elementary Flying Training School. Every opportunity was taken to give 'officer-training' to air squadron cadets, and to instil in them a sense of responsibility and the realisation that a commission carried with it duties rather than privileges.

The University Short Course Scheme

Because it was felt that the broadening effect of a University life would render many young aircrew candidates suitable for a commission on the completion of their training, a scheme was drawn up late in 1940 whereby up to 2,000 candidates for aircrew duties were to be selected each year for a six months university course at Government expense. The first entrance examination was held in March 1941, and the first course opened in April 1941.

Candidates for a short course had to be aged between 17¾ and 18½ years and to have been educated up to school certificate standard.(2) They took the university course while they were on deferred service, having previously been attested as aircrew at an Aviation Candidates Selection Board. They were full members of the university and pursued a course of study in either the Arts or Science faculty. In addition, they were required to study mathematics and mechanics together with one other subject which was either navigation, electricity, meteorology or engineering, to join the University Air Squadron and to take the full Initial Training Wing course under its auspices. During the course, the short course cadets were subject to ordinary university discipline and only wore uniform when they were on duty with the University Air Squadron. Candidates who qualified for a proficiency certificate were posted direct to an Elementary Flying Training School when they were recalled to the R.A.F. on the completion of their university course.(3)

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(1) A.M. File A.178028/41.
(2) Entry to the university short course was extended in August 1942 to aircrew candidates who did not possess a School Certificate or its equivalent, but who were considered to be of a sufficiently high educational standard to benefit from a university course. (A.T.C./S.C./128).
(3) A.M. File A.118950/40.

Technical Training at the Universities

The Wireless Personnel Committee asked the Universities, in October 1940, to include radio training in all their science and engineering courses in order to supplement the flow of men and women who were qualified to fill the increasing number of posts which required radio knowledge in the Services and industry. This scheme came into operation in January 1941. In order to augment the supply of radio specialists still further, a scheme was introduced in May 1941 for the grant of a number of State bursaries in science in order to attract into the universities for science training boys and girls who could not otherwise afford it. The State Bursary scheme was extended, on the recommendation of the Technical Personnel Committee, to electrical and mechanical engineers. The students were mostly civilians, who were placed at the disposal of the Ministry of Labour for allocation to one of the Services or industry at the end of their university course, but bursaries were also granted to a number of serving airmen.(1)

A number of State bursary holders applied to join their University Air Squadron, and their position in this respect was clarified by the Air Ministry in the autumn of 1941. It was stated in September of that year that they could be admitted to an Air Squadron if vacancies existed, and if they were considered to be potentially suitable for commissioning as engineer or signals officers later. They were not allowed to attest because they would be placed at the disposal of the Ministry of Labour and National Service on the completion of their university course.(2) In October 1941, the Air Ministry clarified the position of State bursars who had applied to join University Air Squadrons as aircrew cadets. It was stated that they could be accepted for aircrew duties during their first year at the university only. They would continue to hold their bursaries for one university year, at the end of which they would normally attest and be available for service forthwith. Holders of State bursaries could not join an Air Squadron as aircrew cadets, or attest in the R.A.F. after their first year at the University.(3)

Changes in University Pre-entry Training during the Remainder of the War

The decision made by the Government late in 1941 that men, could, in future, be posted to the Forces at 18½ years instead of 19 years of age(4) had both a good and a bad result for the University Air Squadrons. On the debit side, it inevitably resulted in a reduction in the field from which the air squadrons drew their cadets and a consequent decline in air squadron strength. On the credit side, however, this Government decision resulted in an improvement in the average quality of air squadron cadets since very few men could any longer go to the university to read non-scientific subjects unless they had first been accepted by a University Joint Recruiting Board as potential officers.

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(1) A.M. File A.295906/41.
(2) A.M. File A.158837/41.
(3) A.M. File A.169496/41.
(4) A.M. File S.76367.

The numerical position of the University Air Squadrons was worsened further in December 1942, when the Ministry of Labour decided to put an end to the deferment of men over 18 years of age in order to allow them to read an Arts course at a University.(1) The Air Ministry decided, therefore, to review the position of all the existing twenty-three University Air Squadrons.(2) It was proposed, and agreed by the Air Training Corps Standing Committee in June 1943, that the squadrons should be continued at those universities where short courses were provided or where the squadrons had flights in Teachers' Training Colleges. It was decided to discontinue the squadrons at those universities which, for one reason or another, had not, throughout their history, yielded satisfactory squadrons, and to await the opening of the autumn session at the remaining universities in order to see how many recruits to aircrew category in the R.A.F. chose to use their very substantial period of deferred service by studying in the universities.

The Air Council decided in September 1944 to modify slightly the conditions governing the acceptance of undergraduates into University Air Squadrons for the forthcoming academic year by providing for the admission as 'specialist members' of a strictly limited number of undergraduates who did not necessarily intend to enter the Royal Air Force. It was felt that the admission of these undergraduates would encourage air-mindedness among students of certain faculties who might eventually enter a specialist branch of the Royal Air Force and would also give to students who contemplated entering civilian professions an opportunity of acquiring some knowledge of the Service and of flying. The candidates entered under these arrangements had to be medically fit for flying and had to declare themselves willing to learn to fly up to a certain standard, and were selected only from those undergraduates who could expect to be in residence at the University for at least another two years. When accepted by the air squadron, these candidates were required to complete a a syllabus of training similar to that laid down for the normal entry aircrew member.(3)

It was estimated in November 1944 that the University Short course cadets who had just completed their University course would have to wait for a period of at least six months before being able to start their flying training, and it was probable that cadets who were sent on subsequent Short Courses would not be able to complete their training in time to engage in war operations. From the point of view of the war, therefore, further University Short Course entries were unnecessary. The Air Council were, however, most anxious to retain the interest of the Universities and the Secondary Schools which would be of great importance in connection with recruitment for the post-war Air Force. A considerable time would elapse before it would be possible to resume a cadet entry through Cranwell and longer still before it would be possible to resume the entry on the pre-war model of university cadets who had taken honours degrees. In the meantime, the Air Council considered that an interim

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(1) The strength of normal entry U.A.S. cadets fell from 1,431 in November 1941 to 526 in January 1944. (A.M. File A.354435/42).
(2) A.M. File A.118950/40.
(3) A.M. File A.169496/41.

University scheme of entry was essential in order to maintain the contacts which the Royal Air Force had so successfully established at the Universities and secondary schools. They accordingly proposed to limit future entries to the University Short Course to those applicants who:-

(a) were genuinely interested in continuing to serve in the post-war Air Force,

(b) were prima facie suitable for the grant of permanent commissions, and

(c) were assessed as suitable for training as pilots.

In view of the many factors of uncertainty concerning the post-war Air Force, the Air Council were not at that time, November 1944, in a position to offer permanent commissions on the completion of the course, and they decided, therefore, that in future they would appoint those candidates who satisfactorily completed the Short Course and their flying training to short service commissions for a period of four years on the Active List, followed by four years on the Reserve.(1)

The progress of the war had clearly shown the high value of the university trained man and had established the necessity for securing a proper quota of them for the Service in peace time. The Post War Personnel Reserves Committee, under the chairmanship of the Director General of Manning, accordingly considered the future of the University Air Squadrons early in 1945 and reached a number of important conclusions concerning their organisation, training and membership. The Committee recommended that the University Air Squadrons should be divorced from the Air Training Corps organisation. Squadrons should continue to function at Oxford, Cambridge and London, and there was a strong case for continuing them at seven of the provincial universities. Membership of the squadrons should be restricted to individuals who were actually attending the university in order to study for their degree. Undergraduates who, while in their second or third year at the university, decided to apply for a permanent commission in the Royal Air Force were to be admitted to the squadron supernumerary to the establishment even though they would not be able to complete the requisite minimum of two years' service. The training obligation should be 110 hours ground instruction each year, a half day a week flying training during term time and attendance at an annual camp for a minimum continuous period of 14 days or more as required by the National Service Act.(2)

The Air Training Corps

The Air Member for Training reviewed in November 1940, the existing schemes for pre-entry training for the Royal Air Force.(3) He suggested that the time had come when in the interests of recruitment and training, the Air Ministry should greatly extend pre-entry training and organise it on a nation-wide basis. The existing schemes only covered certain

(1) A.M. File S.103602.
(2) A.M. File A.118950/40.
(3) A.C.P.101(40).

sections of the community. He proposed the development of one organisation which should cover the whole field of pre-entry training, and which should preferably be built on the foundations of the Air Defence Cadet Corps movement. It was essential that any such organisation should not be regarded as the counterpart of the army cadet and sea cadet movements, but that it should be given a status at least equal to that enjoyed by the Officers' Training Corps. He suggested that proficiency certificates similar to the Army certificates 'A' and 'B' should be introduced for members of the new organisation. Some degree of preference would be given in the selection of aircrews and other recruits to candidates who had been members of the movement and had secured proficiency certificates. Careful consideration would have to be given to the relations between the new movement and the schemes for pre-entry education, the essential point being to secure co-operation between the two schemes.

The Air Member for Training's proposals for the new organisation were submitted to the War Cabinet in December 1940. It was hoped that the movement, which was to be known as the Air Training Corps, would eventually be ten times as large as the organisations which it was superseding. It would incorporate the University Air Squadrons, the Air Sections of the Officers' Training Corps and units of the Air Defence Cadet Corps. The University Air Squadrons, although a formal part of the Air Training Corps would remain subject to special regulations.

The Air Training Corps was formed in February 1941, the responsibility for policy direction being vested in Mr. J. F. Wolfenden, headmaster of Uppingham School, who was seconded to the Air Ministry and appointed Director of Pre-entry Training. Air Commodore Chamier, the founder of the Air Defence Cadet Corps, was the first Commandant of the Air Training Corps. A special training branch was created in the R.A.F.V.R. in order to provide officers for the new Corps.(1)

The aim of the Air Training Corps was to widen the field of selection for aircrew training by helping candidates to reach the medical and educational standards, particularly in mathematics, demanded by the Selection Boards. It was hoped, too, that Air Training Corps activities would encourage a greater proportion of the nation's young manpower to volunteer for R.A.F. service, especially for aircrew duties. The minimum age for joining the Corps was 15½ years. Cadets gave an 'honourable undertaking' that their purpose in joining the Air Training Corps was to prepare themselves for service in the Royal Air Force, the Royal Navy (not only the Fleet Air Arm) or for duty as glider pilots in the Army.

Training was carried out at weekends, evenings and summer camps, all cadets being given basic instruction in mathematics, drill, signals, etc. Potential aircrew candidates carried out a syllabus of training approximating to that of an Initial Training Wing, while special syllabi were prepared for cadets who wished to enter the Royal Air Force for technical duties. Proficiency certificates (I and II), comparable with Certificates 'A' and 'B' of the Junior

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(1) A.M.O. A.81/41.

Training Corps and the Senior Training Corps, were awarded, but Part II of the aircrew proficiency certificate was abolished in December 1942 when a new, wider post-proficiency syllabus was introduced with the purpose of encouraging the development of the cadets' initiative and self-reliance.(1) Trade training was directed towards producing tradesmen of the trades which were most in demand, and was later confined to the fitter and wireless trades.(2)

Development during the Remaining War Years

The Air Training Corps incorporated some 20,000 cadets of the Air Defence Cadet Corps when it was formed in February 1941, and within six months its personnel strength had increased to over 146,000.(3) Its numbers continued to rise until a peak strength of 210,000 was reached in July 1942. Strength then began to decline for the following four main reasons: the majority of boys of the eligible age groups had already been combed so that only the new age groups could be drawn upon as they came forward; the age of registration for national service was lowered; cadets were disappointed at not being given the opportunity to train for aircrew duties on account of the reduced R.A.F. requirements, and they consequently lost interest in the Air Training Corps; and there was increasing competition from the Army Cadet Force. By July 1945, the strength of the Air Training Corps had dropped to 96,000.(4) The considerable wastage of cadets which persisted throughout the war, and which was felt to be due partly to the inexperience or unsuitability of officers, was a serious problem. The Inspector, A.T.C., reported in the summer of 1943 that the Corps was then losing cadets at the rate of 70,000 a year through resignations or dismissals, and it followed that only about 50 per cent of the cadets handled by the A.T.C. would reach the Service direct from the Corps.(5) Of the 70,000 exits, the elimination of unsatisfactory cadets, and the loss of others through unavoidable causes, such as change of residence, accounted for some 35,000. The other 35,000 had left the Corps for no good reason, after starting well and showing considerable promise.

In return for the hours of instruction which they voluntarily undertook in their spare time, Air Training Corps cadets were granted certain privileges when they entered the Royal Air Force. Aircrew cadets who had reached a certain standard in their advanced training with the Corps had their period of deferment shortened and were allowed to take a

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(1) A.M. File S.67236.
(2) A.F. File S.89755.
(3) A.T.C./S.C./142.
(4) The rise and fall of A.T.C. strength was as follows:-

February 1941	20,000
July 1941	146,000
July 1942	210,000
July 1943	177,000
July 1944	156,000
July 1945	96,500

These figures include probationers (new entrants with less than three months service) but do not include non-A.T.C. airmen on deferred service who were training with the Corps.
(5) A.T.C./S.C.163.

mid-course examination at their Initial Training Wing, so that, if they were successful in this examination, they were excused six weeks of their initial training. Similarly R.A.F. entrants for ground duties who had obtained the A.T.C. proficiency certificate were granted exemption from two weeks training at the Recruits Centre and thus, in common with the ex-A.T.C. aircrew cadets, attained the status of a trained man, with all the attendant advantages, correspondingly earlier. Ex-A.T.C. aircrew candidates were given another advantage over other entrants in 1943 when it was decided that although non-A.T.C. aircrew candidates suspended from training should be transferred to the Army, ex-A.T.C. candidates should be given the option of remustering for ground duties in the R.A.F. This concession had later to be curtailed on account of the greatly reduced manpower allocation to the R.A.F.

When the entry of ground personnel to the R.A.F. had to be cut down on account of the reduced manpower allocations, preference was given in filling vacancies, wherever possible, to ex-A.T.C. cadets. They were allowed to enter many trades which were closed to other optants for R.A.F. service. In January 1944, it was decided that, except for a small number of trades, recruitment should be limited temporarily to ex-A.T.C. candidates.(1) Even so, it was recognised that many more ex-A.T.C. cadets would be called up in 1944 under the National Service Acts than could be absorbed into the Royal Air Force and the entry of volunteers below registration was therefore confined to those who possessed the A.T.C. proficiency certificate.

The Director General of Manning stated in June 1944 that it would be impossible to absorb all the A.T.C. cadets who became available and that some of them would have to go to the other Services. He said that it would be impossible to reserve for A.T.C. cadets all vacancies for ground duties for the following reasons: there were certain trades, qualifications and standards required by the Air Force which were not obtainable from the A.T.C.; by making such an exclusive rule, the R.A.F. would be denying the Army the services of the young, fit men by keeping him on the ground in employment which might possibly be performed by an older or unfit man who was of no use to the Army; in some cases, by reason of the Schedule of Reserved Occupations, men who were called up could only go to the R.A.F. and not to the other Services so that the Ministry of Labour and National Service would be concerned in any rule limiting ground entries to ex-A.T.C. cadets.(2)

In the following month, July 1944, ground recruiting for the R.A.F. ceased altogether. At the same time, the Director General of Manning recommended that the option of remustering for ground duties which was the privilege of ex-A.T.C. cadets who were suspended from aircrew training should be wholly cancelled, but it was finally decided that the option of remustering should be retained, but only for cadets who were suspended from post-Initial Training Wing training who would be allowed to remuster to sedentary trades if vacancies existed in overseas commands. This decision was influenced by the difficulty which the R.A.F. was already experiencing in finding enough medically fit men for overseas service on account of the

(1) A.M. File S.46541.
(2) Manpower Folder 21 L.M.C.1463/D.G.M.

increasing requirements of Air Command South East Asia and of the plans for the campaign against Japan. Ex-A.T.C. cadets who were suspended from Initial Training Wing were to be treated similarly to non-A.T.C. cadets and transferred to the Army.

At about the same time, the aircrew deferred list, which included some 15,000 ex-A.T.C. cadets, was drastically cut in order to provide high grade men for the Army. The overall manpower situation made preferential treatment for A.T.C. cadets impossible, but the decision not to screen them from transfer to the Army was received, quite naturally, with dismay and bitterness by the cadets, and enthusiasm for the Corps dropped to a very low level. Nevertheless, the training which they had received in the Corps gave ex-A.T.C. cadets an advantage over non-A.T.C. cadets in the elimination tests in which only 72 per cent of the former were rejected as compared with 91 per cent of the latter. Further dismay was caused, and enthusiasm for the Corps dropped still lower when, in 1944 and 1945, the national manpower shortage ruled out the possibility of screening ex-A.T.C. cadets against compulsory transfer to the Army. However, as a result of their A.T.C. training, many of the ex-A.T.C. cadets who were transferred obtained early entry to an Army O.C.T.U.

In addition to training its own cadets, the Air Training Corps was called upon to give an organised course of training to airmen on deferred service who were encouraged to attach themselves to their local A.T.C. unit as supernumerary members for training up to 'proficiency' standard.(1) From the beginning of this scheme in the spring of 1941 until the end of 1942, an average of 11,000 airmen were so attached. During 1943, 13,000 more were attached, while an additional 4,200 were attached in 1944.

The future of the Air Training Corps was considered in the autumn of 1944. It was agreed by the A.T.C. Standing Committee that the post-war A.T.C. should comprise candidates both for aircrew and ground duties, and should be related in size to the intake requirements of the R.A.F. and its Reserves. The committee recommended that the lower age limit for cadets should be 15½ years and the upper age limit should be not higher than the 19th birthday and should coincide, if possible, with the age of commencing national service. Training below the minimum age limit should be conducted through such organisations as the Boy Scouts. The committee agreed that special arrangements would be necessary for the University Air Squadrons and cadet units in public schools. They also recommended that a limited number of cadets should be given special nomination to Cranwell.(2)

Pre-Entry Training Provided by the Local Education Authorities

During the first year of the war, pilot and observer candidates who were rejected by the Aircrew Selection Boards as educationally deficient, and who wished to raise their standard of mathematics in order to be accepted, had to undertake tuition at their own expense. Consequently, the

(1) A.M. File A.391647/42.
(2) A.C.P. 44 (44).

R.A.F. lost a number of otherwise suitable pilot and observer trainees. A review of the manpower resources of the United Kingdom to meet the demands for aircrew, which was made in August 1940, revealed that under the existing R.A.F. standards, the supply of suitable candidates would fall far short of the demand during the ensuing years. Among the proposed remedies was a suggestion that a scheme should be inaugurated at Government expense for the educational training of youths aged between 16 and 18 (and beyond this age where necessary) who were, except in regard to their educational standard, entirely suitable for selection and training as members of crew.(1) The Air Ministry accordingly discussed the problem with the Board of Education. In November 1940 an arrangement was made whereby aircrew candidates who were educationally deficient could, while on deferred service, attend part-time educational courses of up to nine months duration which should enable them to reach the requisite standard. With this in view, the age limit for enlistment (for deferred service) in aircrew was reduced to 17¼ years, and any candidate aged between 17¼ and 30 years could be placed on this pre-entry educational course. The courses were provided by the Local Education Authorites.

This scheme came into operation in December 1940. Each Local Education Authority reported after the first three months of a course, the names of any candidates whom they considered to be unlikely to reach the required standard during the remaining six months of the course. If the men thus reported had been generally satisfactory, apart from their educational progress, they were automatically remustered as wireless operator/air gunner, if they were not already in that category. If they had not been satisfactory, they were reported as generally unsatisfactory and were offered ground duties or discharged. At the end of the nine months course, the Local Education Authorities tested the candidates and reported to the Air Ministry whether they had reached the required standard. A candidate who made rapid progress during the course could be certified by the Local Education Authority as having reached the required standard before the nine months had elapsed, and, if he had reached the age of 18, he was then immediately available for entry into training or for re-consideration by the Aircrew Selection Board as appropriate.

This scheme for part time educational training of aircrew candidates by the Local Education Authorities came to an end in 1943 after the Air Ministry had decided to supersede it by a scheme for full time educational training. Altogether, 8,375 aircrew candidates were referred by the Aircrew Selection Boards to Local Education Authorities for this part time training. Of these, 6,524 reached the prescribed educational standard for the Pilot-Navigator-Bomber category, and 1,063 failed to reach the standard through no fault of their own and were normally remustered to non-P.N.B. category. Only 788 candidates made little or no attempt to reach the required standard and were either remustered to ground duties or were discharged.(2)

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(1) A.M. File S.59083.
(2) A.M. File A.189008/41.

The Preliminary Air Crew Training Scheme

The whole question of pre-entry training for P.N.B. aircrew candidates was reviewed during the autumn of 1942 by the Air Ministry branches concerned. Approximately one third of the candidates then being selected for pilot or navigator training had received little or no more than elementary education.(1) With the increase in the complexity of equipment which had taken place since the beginning of the war, the courses of instruction had tended to become beyond the capacity of trainees who lacked an adequate basic education. Their educational deficiency was shown mainly as follows:-

(a) A lack of facility in performing simple mathematical calculations and an ignorance of basic geometrical notions. This constituted a grievous handicap in the study of navigation, even in its most elementary stages.

(b) A lack of knowledge, in most cases complete, of such elementary science as was absolutely essential for intelligent comprehension of the principles of flight and a practical understanding of the internal combustion engine.

(c) An inability to express simple ideas briefly and with a reasonable degree of clarity.(2)

As a result of this educational deficiency, the wastage rate at Initial Training Wings, although fluctuating, had shown a steady upward trend from about 5 per cent to 10 per cent during 1942, despite the formation of a special training wing for pupils who were found at the Reception Centres and Initial Training Wings to be below standard educationally. In fact, it was clear that the scheme for part time educational training by the Local Education Authorities was no longer able to bridge the gap between many candidates' educational standard and that required for pilot, navigator and air bomber trainees, and that the time had come for the introduction of a far more comprehensive pre-entry educational course.

The Air Ministry accordingly opened negotiation with the Board of Education and the Scottish Education Department, as a result of which arrangements were made with the Local Education Authorities and the Scottish Education Authorities for full time educational courses of six months duration to be held in colleges and schools throughout England, Scotland and Wales. The problem was partly one of providing the candidates with the basic education, mostly of a mathematical and scientific character, which they required in order to be able to absorb the course of aircrew training. A much more important need, however, was to form or revive habits of study, and to develop an attitude of enquiry and self-reliance in the solution of problems. A curriculum of six educational subjects was, therefore, devised.(3) In addition, the

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(1) A.C. 86 (42).
(2) Report by the A.O.C.-in-C., Flying Training Command (A.M. File S.87785).
(3) The following educational subjects were included in the curriculum: mathematics, general science, mechanical drawing, geography, English and modern history.

cadets received instruction in the History of Flight and of the Royal Air Force, in physical training and in General Service information.(1) Great emphasis was laid on the necessity for treating the course as an integral part of the P.N.B. category aircrew training so that the cadets selected for it would not feel that they were regarded as 'sub-standard.' The first six months course under the new scheme, which was known as the Preliminary Air Crew Training Scheme (P.A.C.T.), opened in March 1943.

Although it was recognised that it was desirable to include all categories of aircrew in the P.A.C.T. scheme, the limited accommodation which was available made this impossible in 1943, and only P.N.B. category aircrew candidates were at first eligible for the course. Changes in Service requirements in the spring of 1944 made it possible to extend the scheme to cover all aircrew categories.(2) Cadets who were selected for P.A.C.T. were placed on deferred service when they attested, but were recalled approximately six months earlier than they would otherwise have been so that they were not delayed in entering the normal training sequence. The minimum age for recall was, therefore, reduced to 17¾ years for P.A.C.T. pupils as compared with 18¼ years for P.N.B. cadets who were not selected for the course.

The requirements for candidates for training as aircrew were considerably reduced in the autumn of 1944 and the Air Ministry was therefore able to select for training only the very best of the candidates who came forward. In these circumstances, it was anomalous for the P.A.C.T. scheme to continue. It was accordingly decided to discontinue the scheme and no intakes were sent to the Centres after September 1944, and as each course then came to an end the Centre was closed down. The last Centre closed in February 1945. Between March 1943 and February 1945, over 9,900 aircrew candidates were passed through a P.A.C.T. course.(3)

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A notable feature of Royal Air Force development before the outbreak of war in 1939 had been the increasing complexity of its aircraft and equipment. As a result, there had been an increasing demand for highly trained and intelligent personnel for both aircrew and technical duties. In so far as aircrew candidates had been concerned, the Air Force had been able to insist that they were in possession of a school certificate or had been educated up to an equivalent standard so that they were able to absorb the aircrew training. Successive wartime

(1) A.M. File A.621209/44.
(2) A.M. File S.88530.
(3) A.M. File A.621209/44.

expansion schemes and the competition between each of the Services and industry for such men made it increasingly difficult for the R.A.F. to meet its requirements of reasonably well educated young men. One solution to this problem was found in the provision of various schemes of pre-entry training, mainly for aircrew candidates, for all sections of the nation's young manpower. The experience of the war years proved the value of such training and, therefore, when plans for the provision of reserves in the post-war Air Force were drawn up, it was decided that the University Air Squadrons and the Air Training Corps should continue in existence after the cessation of hostilities.

The value of a university training in the provision of high grade aircrew and technical officers was appreciated and, in order to attract such men into the Air Force, the University Air Squadrons had been opened or re-opened in the early part of the war. Because of the broadening effect of university life, special short courses for potential aircrew officers were introduced early in 1941, and, in all, approximately 5,000 young men underwent such a course.(1) The scheme for pre-entry radio training at the universities provided the R.A.F. with over 500 men and women who were qualified for commissioning for radio and wireless duties.

Experience during the war fully confirmed the wisdom of the decision to form an Air Training Corps for the purposes of bringing as large a proportion as possible of the nation's youth up to the educational and physical standards required for specialised training in the R.A.F. and of giving prospective candidates a grounding in Service subjects which would enable them to absorb instruction more rapidly and more thoroughly when they commenced Service training. Had the replacement rate for aircrew been higher, the value of the A.T.C. would have been even greater. As it happened, however, the reductions in requirements for both aircrew and tradesmen, which took place during the final stages of the war, caused the most profound disappointment among the cadets, their officers and the Local Committees. This proved somewhat embarrassing to the Air Ministry and had an adverse effect on the Corps. Nevertheless, from the time of the Corps' formation until the end of hostilities, well over 100,000 A.T.C. cadets enlisted in the R.A.F. and Fleet Air Arm. Of these, a large number were candidates for aircrew duties, and the proportion of A.T.C. cadets to the total entry for aircrew duties steadily increased. The value of the Corps can be partly judged by the fact that approximately 60 per cent of its members were ex-elementary school boys whose educational

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(1) In all, 5,641 men took the course. They were distributed between the courses as follows:-

Course 1 -	commencing	April	1941	- 278
Course 2 -	"	October	1941	- 501
Course 3 -	"	April	1942	- 544
Course 4 -	"	October	1942	- 862
Course 5 -	"	April	1943	- 819
Course 6 -	"	October	1943	- 993
Course 7 -	"	April	1944	- 614
Course 8 -	"	October	1944	- 880
Course 9 -	"	April	1945	- 150
		Total		5,641

(A.M. File A.384200/42).

weakness would, had it not been for the Air Training Corps, have debarred many of them from acceptance for aircrew training.(1) In short, the facilities available for training in the Air Training Corps undoubtedly resulted in attracting many candidates who would not otherwise have thought of applying for aircrew entry, and in bringing a considerable proportion of young men, who might not otherwise have qualified, up to the general and educational standard required.(2)

The assistance that was provided by the Local Education Authorities in the field of pre-entry training also played a valuable role in helping aircrew candidates, who were entirely suitable except in regard to their educational standard, to bridge the gap between rejection and acceptance by an Air Crew Selection Board. As a result of the various pre-entry training schemes assisted by the Board of Education, some 16,000 young men were enabled to pass the Selection Board and to derive far more benefit from their subsequent aircrew training course.

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(1) The value of A.T.C. educational training can be judged by a comparison of the overall (including A.T.C.) and ex-A.T.C. rejection rates by the Air Crew Selection Boards for educational reasons:

	Overall	A.T.C.
1943	35.4%	21.7%
1944	44.0%	32.3%
1945	83.1%	72.8%

(R.A.F. Personnel Stats. issued by A.D.M. Stats.)

(2) A.C.P. 44(44).

CHAPTER 12

DEMOBILISATION

As early as October 1940, an inter-departmental committee, which included representatives of the three Services, agreed that consideration should be given to the setting up of a Standing Inter-Departmental Committee, to consider plans for demobilisation and make recommendations to the Government. The meeting recommended that such a committee should consider both the principles of demobilisation, which were primarily a matter for the Ministry of Labour and National Service, and the mechanics of demobilisation, which were primarily a matter for the Service Departments.

Planning for demobilisation began in the following January when such a committee, known as the Inter-Departmental Committee on the Machinery of Demobilisation, was set up under the chairmanship of the Minister without Portfolio. The committee included representatives of the Admiralty, the War Office, the Air Ministry and the Ministry of Labour and National Service. Its terms of reference were as follows:-

> 'To consider what machinery is necessary for securing that demobilisation can be effected according to an orderly system of priorities and what action should be taken now to secure that such machinery is in working order when required.'(1)

The Interim Report of the Demobilisation Machinery Committee

In their Interim Report, which was issued in May 1941, the Committee dealt with the broader aspects and underlying principles of the demobilisation scheme. They emphasised that all schemes of demobilisation must be based on the assumption that each Service concerned would have the legal power to retain its men, and that any realistic scheme must envisage the possibility that it would be necessary to maintain the Armed Forces at considerable strength after demobilisation had started. For that purpose it might prove necessary to call up new classes of young men while older men were being demobilised. In preparing their report the committee assumed, therefore, that the various powers under which men could be called to and retained in the Services would remain in force throughout the period with which they were dealing. They accepted as fundamental the following two principles:-

> (a) That the rate at which any demobilisation scheme was to proceed should be so determined that the strength of each of the Services was not at any stage reduced below the numbers necessary to enable the Service to perform effectively the functions required of it.
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> (b) That in general no individual should be demobilised so long as his services were required by the Force with which he was serving.

Subject to these principles, the committee considered that the essential conditions to be fulfilled by any demobilisation

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(1) A.M. File S.69224, Part 1.

scheme were that it should commend itself to the men concerned and to the general public as fair and reasonable and, secondly, that it should make ample provision for the early release of men on industrial, compassionate or other grounds.

The committee agreed that the main factors determining a man's claim to early demobilisation on grounds of fairness were his age and the length of his service in the war. They accordingly recommended that, as a basis for demobilisation arrangements, the personnel of each Service should be divided into demobilisation groups based upon age and length of service. They proposed that all persons who were above a certain age, to be decided upon by the Government before the commencement of demobilisation, should be placed in the first group for demobilisation regardless of length of service, and that all other persons in the Forces should be divided into demobilisation groups on a system of age weighted by length of service. The committee recommended that this scheme should be adopted for all three Services, although they recognised that the actual operation of the scheme would inevitably vary according to the Service concerned.

In formulating the proposed scheme for demobilisation, the committee appreciated that claims to early demobilisation on grounds of age and service would to some extent be in conflict, and that whatever scheme were applied, some discontent would be felt by men who were anxious to return to their homes but were unable to do so. At the same time, the committee were concerned to ensure that the scheme proposed should appeal to the vast majority of the men as being essentially one in which the various circumstances which might give rise to claims for early demobilisation were given due weight.

The Second Report of the Demobilisation Machinery Committee

The Committee on the Machinery of Demobilisation presented a second Report in October 1942. In their first report, the committee had dealt with the basic scheme for demobilisation and had concentrated on the demobilisation of men. In their second report, they dealt with such questions as the demobilisation of officers, and members of the Women's Auxiliary Forces, which constituted separate problems which could only be dealt with separately. They also considered the meaning of the expression 'Service in the present war' in connection with rating for demobilisation priority.

The committee accepted as fundamental the principle that in general, no officer should be demobilised so long as his services were required by the Forces with which he was serving. They were fully alive to the desirability of applying to officers the same principles of demobilisation priorities as applied to men, in so far as it was possible to apply them. They emphasised, however, that Service requirements would be more important and more exacting in the demobilisation of officers than in the case of men. In general, officers were far less interchangeable than men and greater consideration would have to be given to their individual qualifications in determining whether they were needed for the Interim Forces. The qualifications of age and service under Class 'A' which would render a man eligible for demobilisation were likely to be inoperative in the case of a large number of officers, who, for Service reasons, could not immediately be made available for demobilisation. On the other hand, there were in each of the Services many officers

engaged on special duties, the need for which would diminish after the cessation of hostilities. Such officers were not qualified for general duties, and a proportion of them would, therefore, have to be immediately demobilised, irrespective of their position under the general rules for demobilisation priorities. In spite of the above limitations, the committee felt that age and service could be taken into account to a limited extent in determining which officers were to be retained for the Interim Forces and which demobilised.

The committee approached the problem of demobilising the women's Forces by considering whether the scheme recommended as fair and reasonable for men would be equally so for women and, if so, what modifications, if any, were desirable and practicable. They reached the conclusion that, subject to certain modifications, the demobilisation scheme proposed for men was suitable for women. Subject to some special provision for married women, the Committee recommended that the special priorities which would entitle a man to early release irrespective of, or within his age and service group, should operate in a similar manner in the case of members of the Women's Forces. The committee emphasised that the age composition of the Women's Forces was very different from that of the Men's Forces. At the time, October 1942, a high proportion of women in the Forces were under 22 years of age, and it followed that in applying a scheme of priorities based on age and length of service, the determining factor in the majority of cases would be length of service. The committee recommended that, as in the case of men, the first group of women to be demobilised should be those who, irrespective of the length of their war service, were above an age to be decided upon by the Government before demobilisation commenced. They agreed with the principle that a married woman should be given special priority of release in order to enable her to rejoin her husband or children.(1)

The Report of the Demobilisation (Jowitt) Committee

At their meeting held on 4 August 1943, the War Cabinet appointed a committee under the chairmanship of the Minister without Portfolio, Sir William Jowitt, 'to carry out a general survey of our demobilisation plans on the basis of a two stage ending of the war.'(2) This committee issued their report in November 1943.(3)

The committee emphasised that of the many problems which had to be solved in drawing up a satisfactory scheme of demobilisation, none presented greater difficulty than that of reconciling the national needs in reconstruction with the overriding condition that the scheme should be accepted as fair by those principally concerned. A strong case could be made out for the preferential release on industrial grounds of large numbers of men, but the committee could not agree as to the desirability of preferential block releases on occupational grounds. They did urge, however, that individuals needed for the restarting of industry should be made available

(1) This report was submitted to the War Cabinet in November 1942 (W.P.(42)498) and received general approval (W.M.(42)155th Conclusions para. 5).
(2) W.M.(43) 111th Conclusions.
(3) W.P.(43) 494.

when required, even before the end of hostilities if possible and certainly in any interval between an armistice and the beginning of demobilisation.

The committee recommended that men married before the announcement of the Government demobilisation scheme should be graded for demobilisation priority as if they were five years older, but so as to bring them within the category of men over 50 which the Inter-Departmental committee had recommended should constitute the first demobilisation group. They recommended also that the same preference be given to widowers with one or more dependent children, if this were found to be practicable.

The committee then came to the simple proposition that, apart from the case of marriage, the scheme of demobilisation should proceed in the main according to groups based on age and length of service. The question to be decided then was: what relative weight should be attached to the two factors either uniformly or with discrimination as to the character of service. The Inter-Departmental committee had worked out demobilisation groups on the basis that six months of service gave the same priority on demobilisation as five years of age. Their calculations had been made, however, early in 1941 and allowed for little more than three years of war. With the growing length of service, a weighting on this scale seemed to the Demobilisation Committee to attach too little importance to age and all that it tended to imply. They accordingly recommended that each two months of service should normally count as equivalent to one year of age. Thus, for example, a man aged 24 who had had five years' war service would be in the same age and service group as a man aged 30 with four years' war service, or a man aged 36 with three years' war service, or a man aged 42 with two years' war service, or a man aged 48 with one year's war service.

The Committee emphasised that many difficult points would arise in working out the details of military demobilisation, requiring continuing close co-ordination between the Services and the Ministry of Labour and National Service. The committee therefore recommended that, once the broad lines of Government policy had been laid down, a strong co-ordinating committee should be set up to supervise their application.

The report was considered by the War Cabinet on 9 December 1943, together with other memoranda bearing on the question of demobilisation. Main discussion centred on the question of principle raised in the report as to whether there should be block releases of men urgently required for the post-war needs of certain key industries. No decision was reached and the matter was referred for further consideration.

The Issue of Civilian Clothing on General Demobilisation

Another important factor in the personnel demobilisation process, namely that of issuing civilian clothing to servicemen on general demobilisation, was discussed late in 1943 by representatives of the Service Departments, the Ministry of Supply, the Board of Trade and the Treasury. The fundamental question was whether clothing should be issued in kind or whether some equivalent in cash and coupons should be given or, thirdly, whether the two methods could be combined to meet individual preference. Linked with this, was the complementary question of the retention or return of articles of

Service uniform. The War Office and Air Ministry favoured the issue of a complete civilian outfit to servicemen, with no option of cash in lieu of clothing in kind. They were opposed to a cash scheme for a number of reasons including the facts that it would cost a great deal; a considerable number of men would probably spend the money otherwise than on clothes, with the result that there would be an outcry over demobilised men going about in rags; there would probably be interminable arguments about the adequacy of the cash grant; the man would not get such good value and might be exploited in his purchases; there would be the risk of considerable 'black market' activities. The system of issuing either a small money allowance or a very inadequate civilian outfit had been used in 1919 demobilisation and for discharges in the inter-war years, and had not proved satisfactory. The War Office and Air Ministry considered that, in view of the greater diversity of women's clothing and tastes, any attempts to issue clothing in kind to service women would be impracticable and unpopular, and it was accordingly decided to issue them with cash and coupons adequate to cover the retail cost of a civilian outfit. It was advocated that both service men and women should also be allowed to retain certain items of Service clothing.(1)

The Reconstruction Committee of the War Cabinet agreed to these proposals in December 1943.(2)

Proposals for the Re-allocation of Manpower during the Period between the Defeat of Germany and the Defeat of Japan

The Minister of Labour and National Service put forward certain proposals in February 1944 for the redistribution of manpower during the transitional period between the defeat of Germany and the defeat of Japan. He emphasised that the basic principle of his proposals was that the war in Europe and the war in Asia were one war and that it would not end until Japan had been defeated. No general demobilisation could, therefore, take place until the end of the war and compulsory recruitment of men for the Forces would be continued. He proposed, therefore, that any releases of men from the Forces during the transitional period should be expressed, not as demobilisation, but as re-allocation of manpower between the Forces and Industry.(3)

The Minister of Labour proposed that in effecting this re-allocation, the releases from the Forces should be on two different bases. First of all, men who were no longer required by the Forces would be released on an age and service basis, in accordance with the main recommendation of the Jowitt Committee. These were subsequently referred to as Class 'A' releases. The release of men in this class would begin as soon as possible after the European armistice, but the need to re-deploy and retain large numbers of men would make a standstill period necessary. This would be kept as short as possible and it was anticipated that, in any event, some of the men who were in Class 'A', such as those aged over 50, could be released almost immediately after the armistice.

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(1) R. (43) 5., 6 December 1943.
(2) R. (43) 1st Mtg., 20 December 1943.
(3) W.P. (44) 71.

The second class of men to be released were those who were needed to assist in the reconstruction of the country preparatory to general demobilisation. They would be transferred out of turn from the Forces to Industry for certain specified reconstruction employments on the application of the Ministry of Labour. These men were subsequently referred to as Class 'B'. In accordance with the existing practice governing releases to industry, men who were selected for inclusion in Class 'B' would not be compelled to accept release and it would be open to them to await their turn under the age and length of service rule. The release of men in Class 'B' would not begin until a start had been made with the men in Class 'A' and, in order that the release on industrial grounds should not affect the numbers of Class 'A' releases, it was proposed that additional numbers of young men who were then deferred should be called up. The numbers to be released under Class 'B' would, in any case, be kept considerably lower than those in Class 'A' and would be determined from time to time in the light of the immediate requirements of the reconstruction employments; and the extent to which those requirements would be met by men being released under Class 'A' and by transfer from munitions and other industries at home.

In order to preserve the confidence of the Services in the fairness of the scheme it was emphasised by the Minister that it was vitally necessary that there should be a definite distinction between the two classes, and that it should be made clear to the Services as a whole that the men released out of turn would not have the same benefits as those released in their turn. He accordingly proposed that there should be different conditions of release for the two classes:-

Class 'A'

(a) On release they would be given eight weeks' leave with full pay, ration allowance and, where applicable family allowance, dependant's allowance and war service grant. In addition to the period of eight weeks men who had qualified would be given a further period of leave and payments in respect of foreign service.

(b) At the expiration of leave they would be placed on the Reserve, from which they would be recalled only in an extreme emergency.

(c) They would be permitted to exercise their reinstatement rights and go back to their former employment. If they had no jobs to which to return, the Employment Exchanges would give them assistance in finding employment and would not, during the period they would be receiving regular Service payments, regard them as subject to any powers of direction.

Class 'B'

(a) On transfer, they would be given three weeks' leave with full pay, ration allowance and, where applicable, family allowance, dependant's allowance and war service grant, and would then be placed on the Reserve. Payments due on account of foreign service would be held in suspense until after the end of the war.

(b) They would be directed to their reconstruction employments and this would preserve their reinstatement rights.

(c) They would be liable to be recalled individually to the Forces if they discontinued their reconstruction employment.

(d) Men selected for transfer in Class 'B' would not be transferred against their wish, but it would be open to them, if they so desired, to await their normal turn for release in Class 'A'. Once, however, a man had been transferred in Class 'B' he would not subsequently be eligible to apply for inclusion in Class 'A'.

Compassionate Releases

Arrangements already in force would apply.

Medical

Men discharged on medical grounds would receive the same benefits as Class 'A' releases.

War Gratuities and Post-War Credits

In addition to the Service leave payments, a scheme of war gratuities by way of reward for service would be introduced. Announcements would be made both about the amounts of the war gratuities and the date on which they and the post-war credits, accrued in respect of service since 1 January 1942, would be made available through the Post Office Savings Bank.

Pensions

Men who wished to claim for disablement pensions due to war service would apply to the Ministry of Pensions immediately on release or transfer.

Civilian Clothing

Men released or transferred who had had at least six months' service would be given civilian clothes in addition to such Service clothes they would be allowed to retain.

Women

The arrangements for release and transfer would also apply to women with married women having priority over all others. A cash grant and clothing coupons would be given instead of civilian clothing. Certain articles of Service clothing would be retained.

Finally, the Minister endorsed the recommendation of the Jowitt Committee that a committee should be set up without delay to co-ordinate the necessary preparations for applying the release scheme. The committee would keep under review the prospective numbers to be released in Class 'A', the numbers of young men available for call up and would also determine the numbers to be transferred to reconstruction employment in Class 'B'. They would also exercise general control over the release of individual specialists.

The War Cabinet approved these proposals for release during the transition period at their meeting on 17 February 1944, and agreed to the setting up of a committee as recommended by the Minister of Labour. They also agreed that the Departments concerned, acting in consultation through such a committee, should forthwith prepare a detailed scheme for release from the Forces on the basis of the proposals made by the Minister of Labour.(1)

Final Inter-Departmental Planning for Release from the Forces

The co-ordinating committee recommended by the Minister of Labour and approved by the War Cabinet was duly formed, and set up three sub-committees:-

(a) Services Sub-Committee (known as Sub-Committee 'A') to consider the detailed schemes of the Service Departments for release from the Armed Forces with representatives from the three Services, the Treasury and the Ministry of Labour.

(b) Civil Defence Sub-Committee (Sub-Committee 'B') to consider a detailed scheme for release from the Civil Defence Forces. The Services were not concerned.

(c) Re-construction Employment Sub-Committee (Sub-Committee 'C') to determine the numbers of men to be transferred in Class 'B' and to exercise general control over the release of specialists. The Services were represented on this sub-committee.

The first meeting of sub-committee 'A' was held on 22 May 1944.(2) During the course of its subsequent meetings, the committee discussed all the detailed problems that were likely to arise in regard to personnel questions relating to the release scheme, so that, as far as possible, the details concerning pay, allowances and methods of release should be identical for all three Services. The orderly working of the release scheme was due largely to the opportunities for inter-Service discussions and obtaining decisions on various points which were afforded by this committee. Its last meeting was held as late as April 1947.

Sub-Committee 'C' held its first meeting on 1 June 1944. On the suggestion of the Prime Minister, the committee fixed 10 per cent of Class 'A' releases from each Service as the maximum quota for Class 'B' releases.(3) The allocation for the various occupational groups was made by the Minister of Labour. In order to effect block releases by occupational groups, a separate index of men and women in the Services was raised and sorted into occupations. Thus an individual was identifiable by trade and could be easily offered transfer to industry under Class 'B'. It was agreed that specialists (i.e. individuals who were required for reconstruction employment) should be released on the basis of 10 per cent of Class 'B' releases.

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(1) W.M. (44), 22nd Conclusions.
(2) R.F. (A) 1st Mtg.
(3) R.F. (C) 1st Mtg.

Publication of the Government Release Plan

The proposals for the re-allocation of manpower during Stage II of the War, which had been put forward by the Minister of Labour and which had been approved by the War Cabinet in February 1944,(1) were announced to the Services and the general public in a White Paper published in September 1944.(2)

Two months later, in November 1944, the Release Plan was debated in the House of Commons. This interval had provided enough time for comments and opinions from all parts of the world to be collected, and many Members of Parliament who were serving with the Forces overseas came home specially in order to take part in the debate. The speeches in Parliament acknowledged that the plan was fair, simple and easy to administer, an opinion that was expressed by the majority of the men and women in the Services. The most criticised aspect of the scheme was the fact that no priority of release was given for service overseas.

Air Ministry Planning for Demobilisation

While the broad plans for demobilisation were being drawn up on an inter-departmental basis, further plans and arrangements of a more detailed nature were being made within the Air Ministry. The Mobilisation Branch had started preliminary demobilisation work in 1939 as soon as the mobilisation began to approach completion. In February 1941, a special Branch to co-ordinate all branches of demobilisation was set up and carried out preliminary work during the next two years. In view of the large number of directorates involved and the inter-relation of the various parts of the demobilisation problem, it was decided in January 1943 to appoint an Air Ministry Demobilisation Committee under the chairmanship of the Director General of Organisation.(3) The terms of reference of the committee were:

> 'to co-ordinate the general policy to be followed by Air Ministry Departments in regard to the demobilisation of the R.A.F. and its reserve and auxiliary forces and the dispersal of the Dominion and Allied Air Forces, bearing in mind that re-mobilisation may be required before demobilisation is complete. To approve the basis of the Regulations and Instructions to be issued in that connection.'

At its first meeting, this committee appointed a sub-committee, under the chairmanship of the Director of Manning, to consider the necessary Machinery of Demobilisation.

The Sub-Committee on the Machinery of Demobilisation

The Sub-Committee first discussed their greatest problem, namely the demobilisation of airmen and then, in view of the desirability of keeping procedure uniform as far as possible throughout the Service, they considered to what extent the agreed procedure could be adapted to meet the differing

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(1) W.M. (44), 22nd Conclusions.
(2) Cmd. 6548.
(3) A.M. File C.S.10493.

requirements for the demobilisation of officers and members of the Women's Auxiliary Air Force.

It had been agreed by the War Cabinet that demobilisation priorities should be based on a combination of age and length of service during the war. The precise definition of the classes would be promulgated before demobilisation was ordered and it would be such as to enable the allocation of personnel to the various classes to be carried out by unit commanders. The composition of the Air Force would be reviewed periodically during the demobilisation period, and the sub-committee agreed that when it had been decided what units were to be disbanded or reduced in establishments or, on occasion, what special categories of personnel were to be released during each phase, the numbers by ranks and trades available for demobilisation should be calculated in the Air Ministry, allowing for any surplus or deficiency in the overall establishment. An analysis by ranks and trades of the numbers of personnel in the various demobilisation classes would be maintained together with an estimate of regular personnel and of those personnel desirous of remaining in the Service. On that information, the Officer-in-Charge, Records, would calculate the demobilisation classes available for release in each separate category or trade and the result would be promulgated to the Service in order to enable unit commanders to detail personnel for release. A full medical examination was required before demobilisation for Ministry of Pensions purposes, but that Department had agreed that the examination could take place at any time during the six months before demobilisation.

It was important that all details of demobilisation should be carried out precisely, with speed and thoroughness and, to that end, the sub-committee considered that final dispersal should be centralised in a number of special demobilisation centres with specialist staff as was done with the Personnel Transit Centres on mobilisation. Experience of Personnel Transit Centres had shown, however, that staffing and accommodation problems placed limitations on the work which could be done at such units. The committee considered, therefore, that in order to reduce the work of Demobilisation Centres to the minimum, as much as possible of the demobilisation routine should be carried out at units, where time could be made available for it, before personnel were sent to Demobilisation Centres. The procedure would be as follows:

Action at Unit: Before a person was sent to a Demobilisation Centre, the following action would be taken:-

Medical examination,
Adjustment of kit to approved scale,
Accounts settled and drawn,
Pay book withdrawn,
Forms in Demobilisation Book completed as far as possible.

Action at Demobilisation Centre: When the individual arrived at the Centre, the following action would be taken:-

Final medical inspection carried out,
Payment made of money due on account,
Unemployment insurance documents issued,
National Health and Pensions Insurance documents issued,
Full information and advice given regarding measures available for assisting in rehabilitation,
Ration cards and coupons issued,
Documentation completed by special Records staff, and leave warrant, Certificate of Service and other documents to be retained by the individual when demobilised, handed over,
Outfit of civilian clothing issued.(1)

The sub-committee recommended that special Demobilisation Centres should be provided for aircrew and for personnel returning from overseas. Personnel would be dispersed from the Centre nearest their home as that would facilitate remobilisation, should that be necessary.(2)

The committee considered that the procedure for the demobilisation of officers should be generally similar to that for airmen, and that for the W.A.A.F. should be the same as for the R.A.F. Officers of all Branches should be dispersed from officer Demobilisation Centres, but senior officers (acting group captain and above) should be demobilised from the Air Ministry.

It was first proposed to set up ten Demobilisation Centres as it was felt that, in the absence of any information as to the numbers to be provided for, a number of small centres would provide a more flexible organisation than a few large Centres. In later plans, nine additional Centres were added to provide for the needs of W.A.A.F. officers and airwomen, officers, aircrew, prisoners of war and personnel returning from overseas. The estimated number likely to be released from the Service immediately after the end of the war was reduced early in 1944 and in view of this and of the fact that the Army were setting up only nine centres to deal with approximately 1,000,000 men, the estimate of R.A.F. requirements in Centres seemed excessive. It was eventually decided to set up only six Centres: at Uxbridge for officers, aircrew and ground airmen, at Cardington and Kirkham for ground airmen, at Hednesford for personnel from overseas, at Wilmslow for all ranks of the Women's Auxiliary Air Force and in Northern Ireland for all personnel who were serving in Northern Ireland. In fact, however, the Northern Ireland Centre was not formed, Kirkham being used instead, and the W.A.A.F. Dispersal Centre was set up at Wythall instead of Wilmslow.(3) The R.A.F. Clothing Centres were set up at Wembley (to serve Uxbridge), Hednesford, Kirkham and Cardington. The Clothing Centres were staffed with civilian experts in measuring and fitting suits, etc., and advice was given on the right type and fit as in a civilian store.

It was estimated that the process of demobilisation would normally be completed within twenty-four hours of a person's arrival at the Demobilisation Centre, and the

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(1) To men only. W.A.A.F. personnel received a money allowance instead.
(2) A.M.D.C. 12.
(3) A.M.D.C. 35.

organisation was planned on that basis. In order that the organisation could be adjusted to meet possible variations in requirements during the demobilisation period, the Centres were so designed as to be capable of expansion. Centres were located at permanent R.A.F. stations, and not in requisitioned property or where billets were used for accommodation, as they would be operating during the whole of the demobilisation period.(1)

Airmen who were to be demobilised would arrive at the Centre in charge of a draft conducting N.C.O. or senior airman who would deliver to the Centre, under sealed cover, various documents relating to the draft, including a Service and Release Book for each man. This book contained the special documents which were needed in connection with the men's release. It was made up in 'cheque book' form to facilitate the removal of documents for permanent records and to leave each person on release with a booklet containing his own personal documents such as a Certificate of Service, authority for and conditions of release, remobilisation instructions, etc. The incidence of the pages in the book coincided with the various stages to be gone through in the Demobilisation Centre so that the individual would be in and out of the Centre in the shortest possible space of time. It was the aim of the Centre to complete as quickly as possible the actions begun at the unit, so that a man would leave complete with civilian clothes, advance of pay for leave and all documents necessary for him to take his place again as a civilian. In order to speed up action at the Centre, the staff included officials of the Ministry of Health and the Ministry of Labour and National Service who gave advice on resettlement and National Health problems.

Release Problems in the R.A.F. and W.A.A.F.

The policy of release from the Forces which was set out in the Government White Paper on the 'Re-allocation of Manpower between the Armed Forces and Civilian Employment' was common to all three Services, but it was inevitable that there should be some differences between the ways in which the Services applied that policy. As the White Paper emphasised, Service requirements would have to over-ride all other considerations and, in the case of the Royal Air Force, these requirements were such that it would be impossible to promulgate for release at any given time the same age and service groups throughout the Service over the whole range of officer branches, aircrew categories, and airmen and airwomen trades. The White Paper stated specifically that it would be necessary in some Services to deal separately with the various branches and, possibly, with trades and ranks. This was the case in the R.A.F. which, being a highly specialised Service, was unable to switch personnel quickly from one trade to another. There were, in fact, nineteen different types of aircrew duties all requiring special training, seventy-five officer employments and one hundred and ninety-five ancillary and maintenance trades for airmen.

During the build up of the Royal Air Force throughout the war, it had been essential to man the less active trades with older men, thereby freeing younger men for the more active

(1) A.M.D.C. 25.

duties in the Royal Air Force and for service in the Army. There was, therefore, a wide variation in the number of men in each age and service group as between the different trades and the proportion of men in the earlier groups was greater in the sedentary trades than the average for the R.A.F. as a whole.(1) The requirements for the war against Japan, the occupation of Europe and other R.A.F. commitments varied considerably in numbers, qualifications and quality with the different categories and trades, and with those for the war against Germany; the force would not only be smaller but its composition would be different. If releases were effected simply on the basis of reduced requirements for the war against Japan,(2) the personnel released from each trade being selected on the age and service principle, large numbers of young aircrew and other younger men from some trades would be released while older men with possibly a longer period of service in other trades would be retained. The resulting variations in release groups as between the different trades would be so great as to be inequitable. If, on the other hand, releases to cover the numeric reduction of the Air Force were carried out by age and service groups, irrespective of trades, many trades would be reduced far below establishment, so that the Service would be brought to a standstill and operations against Japan could not go on. Both of these methods of release were, therefore, open to the gravest objections, and the best solution was felt to lie in a compromise, which would take the form of retraining large numbers of officers and men not due for early release and training new entrants as they became available, with a view to reducing the variations in release to a minimum. Even with this training and the shortening of courses to a minimum, however, inequalities of release as between trade and trade were inevitable.

Substitution by members of the Women's Auxiliary Air Force added to the complexity of the problem of redeployment and release during Stage II of the war. It was not possible to equate the release groups of the W.A.A.F. with those of the R.A.F. The average age of W.A.A.F. personnel was considerably lower than that of R.A.F. personnel, (women above the age of 25 had not been called up under the National Service Acts), also no more women would be called up into the Forces after the collapse of Germany, and married women would have priority of release over other women in the Forces.

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(1) See Appendix 24 for the numbers of different types of personnel in each age and service release group.

(2) The Target Force for 1 July 1946, and the estimated strength of the R.A.F. (excluding W.A.A.F.) at that date, assuming no releases before that date were as follows:-

	Estimated Strength 1.7.46.	Target 1.7.46.	Surplus
Ground Officers	47,860	36,611	11,249
Ground Airmen	726,724	564,698	162,026
G.D. Officers	58,807	22,102	36,705
Airmen Aircrew	99,291	43,339	55,952
	932,682	666,750	265,932

(T.S.1198/D.G.M.)

Training for Re-settlement in Civil Life.

While plans were being drawn up for the release of R.A.F. and W.A.A.F. personnel, other plans were being made for assisting these men and women to adapt themselves to civilian life after a period, in some cases, of more than five years of Service life. These plans were put into effect in the R.A.F. Educational and Vocational Training Scheme, which formed part of the Government's resettlement plans, and which was planned to start within one month of the end of the war with Germany. Educational and Vocational Training (E.V.T.) was a Service training commitment and it was intended that it should take place during normal working hours. The aim was to provide a minimum of six hours' training a week for each individual, and of that time one hour was to be devoted to resettlement training in modern citizenship.

Three types of training were provided under the R.A.F. E.V.T. scheme. These were resettlement training, educational training and vocational training. The main object of resettlement training was to assist individuals in their return to civil life by giving them a background of knowledge and an understanding of modern citizenship, and by encouraging them to employ their leisure hours usefully. Educational training was provided at elementary, secondary and higher levels, and was designed to improve both the educational standards of individuals and their qualifications for civilian employment. Provision for practical work and experience in workshop practice was included, where appropriate, in basic courses. Vocational training was designed to refresh personnel in the civilian occupations for which they were trained and/or in which they were employed before they joined the Service; to continue the training of individuals who, before or since joining the Service, had embarked on training courses leading to civilian occupations; and to convert Service qualifications into the corresponding civil trade qualifications, where appropriate.(1)

The Operation of the Air Ministry Demobilisation Scheme

The Air Ministry informed overseas Commands on 22 April 1945 of the arrangements for the release of personnel following the defeat of Germany which, it was clear, could not be long delayed. The Commands were informed that after the proclaimed date of cease fire in Europe, which would be known as VE day, a period of six weeks would elapse before releases commenced. The age and service groups for release would be communicated monthly with advance information of the groups for release in the second and third months. It was anticipated that the release during the first month would comprise groups 1 to 5, but that there would be differences in the number of age and service groups for the various officer branches, aircrew categories and trades. Commands were to take such internal drafting action as might be possible in respect of groups 1 to 5 in order to secure that on VE day being proclaimed personnel were available to proceed to the United Kingdom for release concurrently with those in the United Kingdom.(2) On 11 May Commands were informed that

(1) A.M. File A.748653/45.
(2) A.M. File A.181100/53.

releases would commence on 18 June and that action should be taken forthwith for recording the options of married women for priority of release

The Prime Minister had directed the Ministerial Manpower Committee to consider the release of men and women from the Forces, and at the end of May 1945 the Services submitted to the committee their estimates of the numbers which they hoped to release during the second half of that year.(1) So far as the Royal Air Force was concerned, the target was the release of 126,500 men in Class 'A', 12,500 men in Class 'B' and 12,250 women in Class 'A', thus making a total of 151,250. The preliminary target for the first six months of 1946 was 143,000 men in Class 'A', 16,250 men in Class 'B' and 25,500 women in Class 'A', a total of 184,750.(2) The target for the first year of releases was thus 336,000 men and women.(3)

The Minister of Labour and National Service considered that many more women should be made available for release from the Services during the second half of 1945. In the case of the Women's Auxiliary Air Force, he recommended that 80,000 women should be released during that period. This equalled a reduction of 51 per cent in the current strength.(4) The Secretary of State for Air stated that it would be impossible to achieve any reduction on that scale without a radical re-organisation and reduction in the effective strength of the Royal Air Force. He said that the R.A.F. had gone so far in substituting women for men that their withdrawal on such a scale would result in the whole organisation becoming unbalanced. The Chancellor of the Exchequer then made a compromise proposal that the R.A.F. should work out the effects of releasing 45,000 women in the second half of 1945.(5) When this recommendation was considered by members of the Cabinet, the Prime Minister urged that all women who wished to leave the Services should be allowed to do so.

The Manpower Committee considered this recommendation of the Prime Minister but agreed that it would be impracticable to allow the release of all women who desired it. They felt, however, that the Service Ministers should try to increase releases of women and, in the case of the Women's Auxiliary Air Force, proposed that 68,000 officers and airwomen should be released during the second half of 1945.(6) The committee also recommended a speed up in the rate of release of men from the Armed Forces and, in the case of the Royal Air Force, proposed that an additional 79,000 should be released in the second half of 1945.

The effect of these latest proposals by the Manpower Committee was to increase the number of releases which the Royal Air Force was to achieve by the end of 1945, to 209,000 men and 68,000 women, a total of 277,000. As releases on such a scale would be considerably in excess of the existing Air Ministry scheme, the chairman of the Air Ministry

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(1) M.P.(45)12.
(2) W.P.(45)321.
(3) See Appendix 25 for the numbers of men and women released during each month of the Release Scheme.
(4) M.P.(45)14.
(5) M.P.(45) 5th Meeting.
(6) C.P.(45)72.

Demobilisation Committee called for a study to be made of the tasks which would be imposed by the accelerated rate of release with a view to discovering whether the proposed target of 277,000 could be attained. This study led the Air Ministry to conclude that the maximum number that the R.A.F. could release in 1945 was 229,000. On the basis that releases should be in the ratio of 6.5 men to one woman, which was the proportion of men to women in the overall ground strength, a total release of 229,000 would be made up of 198,500 men and 30,500 women. It had, however, been agreed that at least 45,000 women must be included in that total. It was accordingly suggested that releases in the second half of 1945 should be made up of 184,000 men and 45,000 women. It was considered unwise to increase further the number of women to be released, pending a new trade review, in view of the preponderance of women in the already difficult administrative and domestic trades. There would be many difficulties to be solved in achieving the release of even 229,000 men and women, and the Air Ministry Demobilisation Committee emphasised that any attempts to raise the number of releases above that level would lead to serious complications and might even result in an eventual decrease in the number of releases.(1)

This estimate that the Royal Air Force would be able to release only 184,000 men, including 12,500 in Class 'B', and 45,000 women during the remainder of 1945 was submitted to the Ministerial Manpower Committee who, on 14 August, asked the Service Ministers to do everything possible, pending an estimate of the numbers required to meet commitments at 30 June 1946, to accelerate the rate of release during the remainder of 1945.(2)

Government Release Policy following the Collapse of Japan

Early in August 1945, the Manpower Committee held a preliminary review of the manpower situation in the light of the imminent surrender of the Japanese and, on 15 August, submitted the following recommendations to the Cabinet:-

(a) The principles of the demobilisation scheme should be maintained after the defeat of Japan.

(b) There should be introduced a scheme for Class 'B' releases of women, in order to secure the early release from the Forces, out of turn, of a limited number of women whose special skills were urgently required in order to restore production in certain civilian industries.

(c) Although demobilisation would continue to be regulated by the age and length of service principles of the existing scheme, the rate of demobilisation should be speeded up.

(d) Exceptional measures should be taken to increase the labour force in the Coal mining industry. The Service

(1) A.M.D.C. 11th Mtg., 2 August 1945.
A.M. File C.S.17922.
(2) M.P.(45) 8th Mtg.

Ministers were prepared to arrange for the early release in Class 'B' of all ex-miners still in the Armed Forces.(1)

These proposals were placed, on 16 August 1945, before the Cabinet who approved them and invited the Manpower Committee to prepare and submit to the Cabinet early in October a detailed manpower budget for the period ending on 30 June 1946.(2)

An Acceleration of Releases from the Royal Air Force

A Manpower review which was made in the Air Ministry at the beginning of September 1945 revealed that it should be possible to release a total of 459,000 men and women by the end of June 1946. At that time no information was available as to the incidence of contraction of the establishment to the revised target and for that reason it was assumed that the release of 229,000 men and women in 1945, as originally planned, would hold good. The total of 230,000 who would be released during the first six months of 1946 would be made up of 200,000 men and 30,000 women. These figures made no allowance for Class 'B' releases in 1946.(3)

Meanwhile, however, at an Air Council meeting held on 27 August,(4) the Vice Chief of the Air Staff had stated that the provisional programme for the Stage III force 'indicated that the target force for the end of Stage II could now be reached by the end of October instead of the end of December 1945.' The plan to release 229,000 men and women in 1945 had been related to the Stage II target date of 31 December 1945 and it was evident that any acceleration of contraction would increase the number of releases. The broad effect of the decision to accelerate the contraction of the force was to enable the release of approximately 61,000 additional men and women by the end of 1945.(5) It was estimated that the total releases to be effected by 30 June 1946, and the incidence of release to 31 December 1945, would be as follows:-

Releases Classes 'A' and 'B'

June to December 1945	=	290,500	(63%)

Releases Class 'A'

January to June 1946	=	168,500	(37%)
Total	=	459,000	(100%)

In view of the inevitable lag in the disposal of surplus personnel, this estimate of the numbers becoming available for release was subsequently adjusted as follows:-

(1) C.P.(45)113.
(2) C.M.(45), 23rd Conclusions.
(3) Manpower/30.
(4) A.C. Mtg. 8(45).
(5) Manpower/30.

To 31 December 1945		273,800
January to June 1946		164,700
July 1946		20,000
	Total	458,500

The Secretary of State's Review of the R.A.F. Manpower Position

This estimate of R.A.F. releases was presented to the Cabinet in the middle of September 1945 by the Secretary of State for Air in a paper which was designed to show the speed at which releases could be made from the Royal Air Force if the latest recommendations of the Chiefs of Staff as to the squadron strength and disposition of the R.A.F. at 30 June 1946 were accepted.(1) He said that all Commands would have completed their contraction of squadrons by the end of 1945 or earlier, except in A.C.S.E.A. and Transport Command where the contraction would not finally be complete until June 1946. The personnel strength required at the end of June 1946 was approximately 652,000. It was estimated that by the end of 1945 a strength of 864,000 would be reached, on the assumption that the intake of new manpower during 1945 would be that already approved, viz: 45,000 men and 2,500 women. He stated that, as in former estimates of the numbers who could be released, the latest estimate represented the greatest acceleration of releases possible without involving a grave risk of administrative breakdown which would impair the efficiency of the R.A.F. in all theatres.

The Secretary of State declared that a very large programme of training and remustering was still necessary in order to provide replacements for men released or returning from overseas on tour-expiry, and training courses could not be further shortened. Until almost the end of the war the R.A.F. had been organised, at the expense of the training organisation, to maintain the greatest possible impact on the enemy. Consequently, when the German war ended, the R.A.F. was quite unable to effect any of the measures of retraining required to provide for redeployment and release and it was still suffering in September 1945 from this setback. Unless the programme of training and remustering could be completed, it would be impossible to retain a balance in the composition of the force. The disbandment of squadrons and units imposed a special burden on the clerical, accounting and equipment trades, in which there were already, in the autumn of 1945, critical deficiencies. Unless a reasonable minimum period of time was allowed for the contraction of establishments, administrative chaos would ensue. Finally, the Secretary of State emphasised that the R.A.F. was already committed to the release of 45,000 women in 1945, but, had the war continued, it could only have been achieved at the cost of much inefficiency and dislocation. It had therefore been decided not to accelerate further the release of women at the expense of men.

In the light of these factors, and after allowing for increments of personnel becoming available from redundant aircrew and returning prisoners of war, and assuming the cancellation of the R.A.F. obligation to transfer men to the Royal Navy, the R.A.F., said the Secretary of State, would release the following men and women by the end of July 1946:-

(1) C.P.(45) 176.

	Men	Women	Total
Already released by 31 August 1945 in Classes 'A' and 'B'	36,835	17,892	54,727
To be released between 1 September and 31 December 1945 in Classes 'A' and 'B'	191,965	27,108	219,073
Total by the end of 1945	228,800	45,000	273,800
To be released between 1 January and 30 June 1946 in Class 'A'	147,700	27,000	174,700
Balance to be released in July 1946	17,000	3,000	20,000
Grand Total	393,500	75,000	468,500

This estimate represented an increase of 44,800 men and women released by 31 December 1945 and a further 104,700 by July 1946 compared with the previous programme for 229,000 men and women in 1945 and 90,000 in the first half of 1946.

The Secretary of State for Air stated that he had carefully considered whether the application of the age and service principle in the R.A.F. was unduly rigid. The principle was being applied separately to each branch, trade or aircrew category, and to rank within these branches, trades and categories. This enabled surplus personnel to be released ahead of the average, whilst deficiencies, where necessary, could be covered by a measure of retardation of release.

Further Accelerations of Releases

The programmes of releases put forward by the Air Ministry and the other Service Departments were considered by the Manpower Committee and the Cabinet during the last week of September 1945. In the aggregate, these programmes provided for an increase of only about 200,000 releases in 1945 on the previous estimates, whereas the Manpower Committee had considered it essential to release an additional 400,000, thus releasing a total of 1,500,000 during 1945.(1) The Cabinet agreed that the target of 1,500,000 should stand and that the Services should re-examine their estimates on the basis that there were no shipping difficulties.(2) Shipping difficulties were one of the most serious drags on the progress of demobilisation.

The Services were thus faced with the necessity of releasing another 200,000 men and women by the end of 1945. The representatives of the Services considered that the 200,000 should be apportioned to each Service in ratio to total releases to 30 June 1946 which would yield:-

(1) C.P. (45) 191.
(2) C.M. (45) 36th Conclusions, 28 September.

Navy	30,000
Army	140,000
R.A.F.	30,000
	200,000

Subsequently, however, the War Office declared that this would be quite impossible for them having regard to the fact that they had already raised their releases for 1945 to 818,000. Each Service had, therefore, to decide the extent to which it could contribute towards the target.(1)

It was pointed out that the effect of accelerating the rate of release from the R.A.F. up to the end of 1945 would be to cause a further loss of experience, both in officers and senior N.C.O.s. This was a problem which was already causing concern in meeting the current programme of releases. Nevertheless, the R.A.F. agreed to release during 1945 an additional 45,000 men and women. The total of 45,000 would be made up of 38,000 men and 7,000 women. The 38,000 additional men would include all returned prisoners of war, who were to be released irrespective of their age and service group. The release of this additional 45,000 men and women would be met as under:-

By reduction in establishments	33,000
By reduction in Manning pool	1,000
By deficiency on establishments	11,000
Total	45,000

This acceleration of release brought the total of releases for 1945 up to 266,800 men and 52,000 women, and reduced the releases scheduled for the first half of 1946 proportionately to 126,700 men and 23,000 women. After allowing for discharges and other wastage, the R.A.F. expected to lose a total of 338,000 men and women during 1945 and a further 167,300 during the first half of 1946.

Yet another speed up in releases from the Royal Air Force was announced in October 1945. Considerable concern was being expressed in Parliament, in the Forces and in the country as a whole, at the fact that whereas, on current plans, the Royal Navy would have reached release group 45, and the Army group 31 by June 1946, the R.A.F. would only have reached Group 28. From the fact that the Navy proposed to release men in Group 45 in June 1946 it was generally assumed by the public that the Navy was releasing greater numbers than the R.A.F., but that was not the case. The fact was that the R.A.F. had received considerably greater numbers of recruits than had the Navy in the earlier stages of the war, and a large proportion of the R.A.F. intake had been made up of older men. In the later stages of the war, however, the intake to the Navy had been considerably increased and had consisted largely of younger men. Since date of enlistment and age were the deciding factors in determining an individual's release group, it followed that the R.A.F. had far greater numbers in the early age and service groups than had the Royal Navy.(2) The figures were as follows:-

(1) Manpower/30.
(2) See Appendix 24 for numbers in each Age and Service Release Group.

Groups:	1 - 20	21 - 32	33 - 41	42 - 49
Navy	37,000	159,732	94,705	125,000
R.A.F.	90,000	407,107	217,434	126,000

In the later stages of demobilisation, the discrepancy between the Navy and the R.A.F. would be reduced because in the groups from 51 onwards the Navy had 46 per cent of their strength, whereas the R.A.F. had only 12 per cent.(1)

Nevertheless, the pressure of public opinion was such that the Under Secretary of State for Air was compelled to announce to the House of Commons on 22 October 1945, that the Royal Air Force hoped to reach release group 32 by June 1946, an advance of four groups on the previous programme.(2) It was estimated that, in order to reach Group 32 by the end of June 1946, an additional 82,000 personnel would have to be released during the first half of that year. Thus, releases in Classes 'A' and 'B' during that period would total approximately 232,000. After making an allowance for discharges and other wastage, the total loss of manpower to the R.A.F. during the first half of 1946 was expected to be 249,300. The additional releases would be offset partly by a contraction of roughly 40,000 in the target force and partly by the flow into the Service of new manpower.

The Ministerial Manpower Committee requested the Royal Air Force, in November 1945, to maintain during 1946 their current weekly rate of release and thus complete the latest June 1946 programme by the end of April 1946.(3) The Air Ministry were compelled to refuse this request, however, in the light of the following factors:-

(a) The Army and Navy release programmes for 1946 remained the same as those announced early in October, whereas that of the R.A.F. had been speeded up by the addition of 82,000.

(b) Although there might be some additions to be made to the R.A.F. releases, the Air Ministry did not feel entitled to anticipate further contraction in the early months of 1946 in anticipation of the Chiefs of Staff's revised programme which was due in the following month.

An Increased Proportion of Class 'B' Releases

The Service Minister considered in November 1945 that, in view of the rapid flow of Class 'A' releases which was then taking place, the proportion of releases in Class 'B' could be increased and should continue beyond the end of 1945. They recommended that Class 'B' releases should be effected on the basis of 15 per cent of the 2,000,000 releases in Class 'A' which would have been achieved by March 1946. Release in Class 'B' was to be offered to a sufficient number of men to ensure that over any given period of time actual releases in Class 'B' did, in fact, amount to between 10 and 15 per cent of Class 'A' releases. The Manpower Committee further recommended that Class 'B' release should not be offered to

(1) Manpower/33.
(2) Hansard Vol. 414 Col.
(3) M.P. (45) 14th Meeting, 21 November.

men with less than one year's service in the Forces since it would not be worth calling up men for so short a period of service.

These proposals were presented by the Manpower Committee to the Cabinet(1) who approved them early in December 1945.(2)

Releases During 1946

The Chiefs of Staff decided in January 1946 that the strength of the Royal Air Force should be reduced to 563,000 by the end of June 1946 and to 440,000 by the end of March 1947.(3) The figure of 563,000 included trainees and men and women in the release pipeline up to the date of actual release to civil life, so that the net trained strength to which the R.A.F. had to be reduced by 30 June 1946 was 538,000.

In order to bring down the strength to the required level, the Royal Air Force would have to release approximately 286,000 men and women during the first half of 1946, thus making a total of some 605,000 releases since the commencement of the release scheme in June 1945. In addition, it was estimated that during the same period some 15,500 men and women would be discharged. The rate of contraction which was envisaged in January 1946 was expected to result in a high degree of disturbance in units, and this, together with the necessity for maintaining the necessary proportion of personnel overseas, was likely to have a detrimental effect on functional and operational efficiency. Owing to an excess of actual strength at the end of 1945, the numbers of men and women due to be released during the first half of 1946 were subsequently increased to 304,800. An additional 193,000 would be released during the second half of 1946 and first quarter of 1947. The completion of the task of contraction to the latest target was dependent, so far as overseas Commands were concerned, on the availability of the necessary transport.

This estimate of 304,800 releases during the first half of 1946 soon became obsolete. The Defence Committee instructed the Chiefs of Staff, in January 1946, to examine the position which would result from a reduction in the estimated manpower strength of the Royal Air Force:-

(a) At 30 June 1946 from 563,000 to 475,000, plus an intake of 48,000, making a total of 523,000, and

(b) at 31 December 1946 from 481,000 to 275,000 plus 30,000 trainees, a total of 305,000.(4)

One aspect of the problem which was thus presented to the Air Ministry was how to release at least 500,000 personnel out of a total of 800,000 between 1 January and 31 December 1946 without causing complete disorganisation of the force and a critical state of morale. The manpower targets suggested to the Chiefs of Staff were adopted for planning purposes and the

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(1) C.P. (45), 28 November.
(2) C.M. (45) 58th Conclusions, 3 December.
(3) C.O.S. (46) 5 (O).
(4) A.C. P. 12 (46).

R.A.F. was then faced with the necessity for releasing 296,000 men and 49,000 women, a total of 345,000, during the first half of 1946. This would bring releases for men up to an average of Group 35 by the end of June and represented an additional 40,000 releases on the previous programme.

As a result of the necessity to achieve a 10 per cent financial saving in the Air Estimates, the target manpower strength of the R.A.F. was reviewed in February 1946 and it was then decided to reduce the target strength for 30 June 1946 to 491,000. The number of releases planned for the first half of the year was consequently increased to 377,000. In addition, the R.A.F. would have to release a further 215,000 men and women during the second half of 1946, in order to bring the strength down to the postulated figure of 305,000, which included an anticipated intake of new manpower.

A Slowing Down in the Rate of R.A.F. Releases

It had become clear by July 1946 that, if the Royal Air Force was to remain an effective fighting force, it would be impossible to reduce the manpower strength by the end of the year to the ceiling of 305,000 to which the R.A.F. had been committed by the Defence Committee. It had been anticipated that, on the basis of a ceiling of 305,000, the process of demobilisation would involve a period of unbalance which would be expensive in manpower and bring the efficiency of the Service down to a very low level. This unbalance had proved to be even worse than had been anticipated and the plans which had been made at the beginning of the year were no longer workable. The commitment for training and re-training had been under-estimated and the loss of effective manpower involved in the large scale re-organisation and re-grouping of the Force was proving larger than had been expected. The embarrasments caused by these two factors had been accentuated by the failure to liquidate certain overseas commitments and by certain over-optimistic assumptions concerning the response to the recruiting campaign. In those circumstances, it was clear that 31 December 1946 was too early a date for reducing the strength of the Royal Air Force to 305,000 and a postponement of such a reduction was, therefore, inevitable.

The Secretary of State for Air accordingly sought authority for setting the Royal Air Force manpower ceiling for the end of 1946 at 330,000, and for adjusting the demobilisation programme for the R.A.F. so as not to go beyond an average of Group 47 for airmen in ground trades by the end of the year.(1) The Cabinet agreed to this retardation of releases from the R.A.F. during the remainder of 1946, which would permit the demobilisation of no more than average of one group during each month of the final quarter of the year. It was estimated in October 1946 that 181,400 men and 23,100 women would be released during the last six months of 1946.

(1) C.P. (46) 312, 30 July.

The End of the Scheme for Class 'B' Releases

The Manpower Committee agreed in November 1946 that no more offers of release in Class 'B' should be made to men and women in the Services, except for a very limited number of key individuals who could be proved to be really urgently required. The Minister of Labour stated that the Class 'B' release scheme had served its purpose and that there was an increasing tendency for it to be used in order to secure the release of men who had been called up after the war had ended, which was neither justifiable nor in accordance with the purpose for which the scheme had been devised.(1)

Releases during the Remainder of the Demobilisation Period

The Royal Air Force manpower ceiling had not been finally decided when the provisional release programme for the first half of 1947 was announced early in November 1946. This programme was for the release of 46,280 men and 7,700 women, a total of 53,980. Within three weeks of this programme being issued, the Defence Committee authorised a manpower ceiling for the end of December 1946 of 340,000 men and women. This ceiling would fall to 330,000 by the end of March 1947 and to 315,000 a year later. Release plans for 1947 had to be made with the aim, not only of equating strength with establishment, but of fulfilling the Government pledge to release by the end of 1947 all those men who had been called up before the end of 1944.(2)

Working on these bases, it was estimated in January 1947 that the following releases would be effected during the current year:-

	Men	Women	Total
1st Quarter	32,610	1,780	34,390
2nd Quarter	26,660	1,780	28,440
3rd Quarter	27,320	3,060	30,380
4th Quarter	26,030	3,070	29,100
Total	112,620	9,690	122,310

The strengths of the Services were reviewed in the autumn of 1947 consequent on the necessity to return the maximum numbers to civilian employment. The original manpower ceiling of the Royal Air Force of 315,000 at 31 March 1948 was then cut to 261,000, excluding Poles and local enlistments, which increased the numbers available for release. The programme announced in October 1947 forecast 55,960 releases (men and women) during the first quarter of 1948. Other programmes which were issued later were designed to implement the Government promise to release before the end of 1948 all those who had been serving at the end of 1946.(3) The Government decided in the autumn of 1948, however, that releases from the middle of September 1948 would be delayed

(1) M.P. (46) 8th Mtg.
(2) Cmd. 6381 - 'Call up to the Forces in 1947 and 1948.'
(3) Cmd. 6831.

by three months. Thus 31 March 1949, instead of 31 December 1948, saw the virtual ending of the Release Scheme.

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Despite criticisms in Parliament, in the Press and in the country as a whole, the Demobilisation scheme, which was put into operation in June 1945, can be said to have been a success. This was the first occasion on which the Air Ministry had first-hand experience of demobilisation problems as R.A.F. demobilisation following the first World War had been carried out by the Army. The lessons which had been learned in the demobilisation of the Services after the 1914 - 1918 war were borne in mind by those who were responsible for planning releases after the second World War, and nothing comparable to the dissatisfaction and troubles which had occurred after the 1914 - 1918 war was experienced. Although protests were made because no weighting was given to married men, to those who had served overseas for long periods, or to those who had volunteered for the Auxiliary and Reserve Forces before the war, the scheme for release based solely on age and length of wartime service was generally accepted as being fair. It had the added advantages of being simple to administer and of being understood by the men and women themselves.

Although it had previously been explained to Service personnel that it might be necessary to invoke the military necessity clause and so retain certain men in scarcity trades beyond their time for release, a certain amount of criticism was caused by the disparity of release groups at any one time between certain trades. The fact that the other two Services, particularly the Royal Navy, appeared at one time to be releasing their personnel more rapidly than the Royal Air Force, also caused a degree of disquiet among R.A.F. personnel. These differences were exploited and used as the reason for the unrest which occurred at a number of R.A.F. stations in the Middle East and Far East during the early part of 1946. Nevertheless, demobilisation worked smoothly on the whole and the administrative machinery of release worked well, most of the delays, which occurred to a comparatively small number of men, at the Dispersal Centres being due to errors or omissions in documents by the men's units.

There would have been far less discrepancy in the rate of release as between trades if recruitment for regular service and extensions of service had been better. These could have been made better if careers had been foreseeable; if the size and shape of the post-war R.A.F. had been settled; if the new pay code had been better; if there had been more news of and more married quarters available; and if more information, or promise of information, had been available concerning overseas tours and family accommodation.

ULTIMATE REGULAR PERSONNEL ESTABLISHMENTS UNDER PRE-WAR EXPANSION SCHEMES(1)

Scheme	Cabinet Approval	Target Dates	G.D. Officers	Other Officers	Airmen Pilots	Other Airmen	Total
A	18 July 1934. Cab. 29(34)	31 March 1939	4,400		37,975		42,375
C	21 May 1935. Cab. 29 (35)	31 March 1937	5,000(2)			49,000(4)	54,000
F	25 February 1936. Cab. 10(36)	31 March 1939	6,000		1,300	66,500	73,800
H	14 January 1937 Rejected original Scheme H. 24 February 1937 Approved certain measures to enable Scheme H to be implemented at short notice. Cab. 9(37)	31 March 1939	7,300		1,900	79,000	88,200
J	22 December 1937 Referred back for modification. Cab. 48(37)	Summer 1941	8,300		2,600	96,000	106,900
K	Considered on 14 March 1938 - referred back for acceleration. Cab. 13(38)	31 March 1941	6,750	1,850	2,250	85,000	95,850
L	Referred to a Cabinet Committee of four on 6 April 1938 - finally approved on 27 April 1938.	31 March 1940	8,600(2)	1,200		80,000	89,800
M	7 November 1938 Approval in principle. Cab. 53(38)	31 March 1942	11,370(2)	1,550		100,000	112,920
M Revised		31 March 1941	12,355(3)	1,550		118,600(5)	132,505

(1) A.H.B./V/5/1-12.
(2) Includes Airmen Pilots.
(3) Includes Airmen Pilots. A.H.B./IC/2/2 (E.P.M.114(39)).
(4) Includes Non-G.D. Officers
(5) A.H.B./IC/2/2 (E.P.M.114(39)).

ROYAL AIR FORCE (REGULAR) PERSONNEL STRENGTH - 1 APRIL 1919 to 1 SEPTEMBER 1939(1)

DATE	OFFICERS	CADETS	TOTAL OFFICERS	AIRMEN	APPRENTICES(2)	GRAND TOTAL
1 April 1919	17,267	2,081	19,348	83,928		103,276
1 April 1920	3,061		3,061	25,647		28,708
28 February 1921	2,764		2,764	24,827		27,591
1 April 1922	2,918	90	3,008	26,457		29,465
" " 1923	2,962	85	3,047	27,036		30,083
" " 1924	3,166	102	3,268	28,159		31,427
" " 1925	3,354	115	3,469	29,215		32,684
" " 1926	3,377	104	3,481	30,528		34,009
" " 1927	3,215	107	3,322	26,715		30,037
" " 1928	3,268	113	3,381	24,213	2,890	30,484
" " 1929	3,286	99	3,385	24,691	2,989	31,065
" " 1930	3,378	117	3,495	25,317	3,177	31,989
" " 1931	3,358	123	3,481	25,799	3,189	32,469
" " 1932	3,403	119	3,522	26,027	2,738	32,287
" " 1933	3,382	118	3,500	25,601	2,101	31,202
" " 1934	3,343	107	3,450	25,381	1,669	30,500
" " 1935	3,390	111	3,501	26,277	2,367	32,145
" " 1936	3,963	132	4,095	37,523	4,186	45,804
" " 1937	4,846	147	4,993	45,411	5,759	56,163
" " 1938	6,026	143	6,169	56,072	7,224	69,465
" " 1939	7,214	136	7,350	85,464	8,385	101,199
1 September 1939	8,200	122	8,322	101,484	7,620	117,426

(1) Figures supplied by A.D.M. (Stats.)
(2) Apprentices are included in the Airmen total until 1928. After 1 April 1934 the figures in the Apprentice column include Apprentices and Boy Entrants.

STRENGTH OF OFFICERS AND OTHER RANKS (R.A.F. AND W.A.A.F.) - SEPTEMBER 1939 TO AUGUST 1945(1)

Date	R.A.F.			W.A.A.F.			TOTAL		
	OFFICERS	OTHER RANKS	TOTAL	OFFICERS	OTHER RANKS	TOTAL	OFFICERS	OTHER RANKS	TOTAL
3 September 1939	11,519	162,439	173,958	234	1,500	1,734	11,753	163,939	175,692
1 January 1940	15,561	199,171	214,732	359	8,403	8,762	15,920	207,574	223,494
1 April 1940	16,332	223,449	239,781	520	8,420	8,940	16,852	231,869	248,721
1 July 1940	18,431	272,992	291,423	687	11,170	11,857	19,118	284,162	303,280
1 October 1940	23,636	396,473	420,109	1,170	16,194	17,364	24,806	412,667	437,473
1 January 1941	26,361	464,401	490,762	1,368	19,121	20,489	27,729	483,522	511,251
1 April 1941	28,584	534,030	562,614	1,547	25,497	27,044	30,131	559,527	589,658
1 July 1941	31,760	632,866	664,626	1,891	35,493	37,384	33,651	668,359	702,010
1 October 1941	37,880	734,727	772,607	3,012	61,297	64,309	40,892	796,024	836,916
1 January 1942	43,486	773,773	817,259	4,001	94,410	98,411	47,487	868,183	915,670
1 April 1942	46,134	775,246	821,380	4,041	106,787	110,828	50,175	882,033	932,208
1 July 1942	49,987	789,787	839,774	4,695	120,961	125,656	54,682	910,748	965,430
1 October 1942	54,483	846,065	900,548	5,379	136,088	141,467	59,862	982,153	1,042,015
1 January 1943	59,630	880,934	940,564	5,796	160,173	165,969	65,426	1,041,107	1,106,533
1 April 1943	64,783	889,104	953,887	5,940	174,119	180,059	70,723	1,063,223	1,133,946
1 July 1943	69,093	903,446	972,539	5,974	175,861	181,835	75,067	1,079,307	1,154,374
1 October 1943	74,034	914,362	988,396	5,880	174,459	180,339	79,914	1,088,821	1,168,735
1 January 1944	80,190	924,481	1,004,671	6,040	170,780	176,820	86,230	1,095,261	1,181,491
1 April 1944	84,585	921,560	1,006,145	6,090	169,578	175,668	90,675	1,091,138	1,181,813
1 July 1944	88,615	922,812	1,011,427	6,199	168,207	174,406	94,814	1,091,019	1,185,833
1 October 1944	92,577	907,600	1,000,177	6,276	164,968	171,244	98,853	1,072,568	1,171,421
1 January 1945	98,070	897,795	995,865	6,355	159,810	166,165	104,425	1,057,605	1,162,030
1 April 1945	99,926	881,736	981,662	6,316	153,306	159,622	106,242	1,035,042	1,141,284
1 May 1945	101,064	874,965	976,029	6,278	151,008	157,286	107,342	1,025,973	1,113,315
1 July 1945	103,023	859,548	962,571	6,233	146,719	152,952	109,256	1,006,267	1,115,523
1 September 1945	100,107	840,760	940,867	5,638	130,253	135,891	105,745	971,013	1,076,758

(1) These figures are taken from 'R.A.F. Personnel Statistics for the period 3 September 1939 to 1 September 1945'. They do not include Dominion Air Forces' personnel at R.A.F. posting disposal. R.A.F. personnel on loan to the Fleet Air Arm are included.

APPENDIX 4

THE DISTRIBUTION OF THE STRENGTH OF THE R.A.F. AND W.A.A.F. BETWEEN HOME AND OVERSEAS COMMANDS, 3 SEPTEMBER 1939 to 1 SEPTEMBER 1945(1)

	HOME			OVERSEAS			HOME/ OVERSEAS RATIO
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	
3 September 1939	158,718	1,734	160,452	13,857	-	13,857	10.5 : 1
1 January 1940	199,194	8,762	207,956	13,871	-	13,871	13.4 : 1
1 April 1940	221,923	8,940	230,863	16,121	-	16,121	12.9 : 1
1 July 1940	270,420	11,857	282,277	19,200	-	19,200	13.4 : 1
1 October 1940	395,341	17,361	412,702	23,011	3	23,014	16.6 : 1
1 January 1941	453,435	20,486	473,921	35,590	3	35,593	12.6 : 1
1 April 1941	512,711	27,041	539,752	48,229	3	48,232	10.8 : 1
1 July 1941	595,503	37,381	632,884	67,507	3	67,510	9.1 : 1
1 October 1941	667,051	64,279	731,330	103,952	30	103,982	6.9 : 1
1 January 1942	683,095	98,382	781,477	132,561	29	132,590	5.8 : 1
1 April 1942	657,057	110,766	767,823	162,390	62	162,452	4.7 : 1
1 July 1942	627,545	125,474	753,019	209,493	182	209,675	3.5 : 1
1 October 1942	658,385	141,259	799,644	239,366	208	239,574	3.3 : 1
1 January 1943	680,325	165,760	846,085	257,478	209	257,687	3.2 : 1
1 April 1943	663,841	179,848	843,689	287,372	211	287,583	3.0 : 1
1 July 1943	663,353	181,527	844,880	306,810	308	307,118	2.7 : 1
1 October 1943	655,786	180,000	835,786	330,607	339	330,946	2.5 : 1
1 January 1944	659,982	175,940	835,922	342,746	880	343,626	2.4 : 1
1 April 1944	672,761	174,568	847,329	331,574	1,100	332,674	2.3 : 1
1 July 1944	696,942	171,856	868,798	312,737	2,550	315,287	2.7 : 1
1 October 1944	695,993	168,151	864,144	302,485	3,093	305,578	2.8 : 1
1 January 1945	683,587	162,535	846,122	310,628	3,650	314,258	2.7 : 1
1 April 1945	669,927	155,370	825,297	310,088	4,252	314,340	2.6 : 1
1 May 1945	667,335	152,243	819,578	306,640	5,043	311,683	2.6 : 1
1 July 1945	662,080	147,766	809,846	298,358	5,186	303,544	2.6 : 1
1 September 1945	653,243	130,396	783,639	285,953	5,495	291,448	2.6 : 1

(1) These figures, which are taken from 'Royal Air Force Personnel Statistics for the period 3 September 1939 to 1 September 1945', do not include Dominion and Allied Air Force personnel placed at R.A.F. posting disposal.
The total strengths derived from these figures do not agree with those in Appendix 3 which include R.A.F. personnel on loan to the Fleet Air Arm.

APPENDIX 5

THE STRENGTH OF R.A.F. REGULAR, AUXILIARY AND RESERVE OFFICERS ON THE OUTBREAK OF WAR.

	R.A.F.	A.A.F.	R.A.F.V.R.	R.A.F.O.
General Duties	6,402	915	375	1,142
Command Spec. & P.T.	353			
Equipment	722	12	277	33
Accountant	311	32		9
Medical	282	46	178	50
Dental	45		25	13
Chaplains	76	7		
Legal	5			
Music	2			
Asst. Provost Marshal	2			
Admin. & Special Duties			1,053	
Meteorological			82	
Miscellaneous				142
TOTALS	8,200	1,012	1,990	1,389

APPENDIX 6

COLONIAL PERSONNEL SERVING IN OR WITH THE ROYAL AIR FORCE IN FEBRUARY 1945(1)

A. Enlisted in the R.A.F. or R.A.F.V.R.

African Colonies	60	
Bahamas	385	
Bahrein and Seychelles	5	
Barbados	132	
Bermuda	78	
British Guiana	272	
British Honduras	40	
Ceylon	62	
Cyprus	10	
Falkland Islands	20	
Fiji Islands	30	
Gibraltar	10	
Hong Kong	6	
Jamaica	3,720	
Leeward Islands and Westward Islands	80	
Malta	1,450	
Mauritius	128	
Palestine and Egypt	2,500	
Straits Settlements	600	
Trinidad	146	
	9,734	9,734

B. Local R.A.F. Forces

West African Air Corps	5,200	
Mauritius Marine Craft Section	24	
	5,224	5,224

C. Enrolled in W.A.A.F. in Middle East	830	830
D. Aden Protectorate Levies	2,000	2,000
		17,788

(1) Manning 5.b. Summary dated 1 February 1945.

ANALYSIS OF MINISTRY OF LABOUR REGISTRATIONS(1)

	Registration Date	Age Group	Total Registrations	R.A.F. Preference Air	Percentage	R.A.F. Preference Ground	Percentage	R.A.F. Preference Air or Ground	Percentage
1939	21 October	21-22 and 20	228,539	11,000	4.81	54,591	23.89	2,000	.88
	9 December	22-23 and 20	253,574	10,000	3.94	61,907	24.41	-	-
1940	17 February	23-24 and 20	275,931	13,064	4.73	54,989	19.93	2,076	.75
	9 March	24-25 and 20	342,697	14,277	4.17	68,312	19.93	2,843	.83
	6 April	25-26 and 20	331,792	14,319	4.32	71,132	21.44	2,776	.84
	27 April	26-27 and 20	331,776	12,654	3.81	73,254	22.08	3.616	1.09
	25 May	27-28 and 20	343,997	17,522	5.09	80,100	23.29	4,077	1.19
	15 June	28-29	305,127	10,006	3.28	41,730	13.68	2,302	.75
	22 June	29-30 and 20	350,597	8,683	2.48	40,216	11.47	2,092	.60
	6 July	30-31	327,747	11,707	3.57	69,979	21.35	2,923	.89
	13 July	31-32	339,139	11,234	3.31	81,024	23.89	3,168	.93
	20 July	32-33	327,925	9,876	3.01	92,021	28.06	3,192	.97
	27 July	33-34 and 20	371,280	4,182	1.13	101,556	27.35	7,848	2.11
	9 November	34-35 and 20	403,713	12,076	2.99	138,986	34.43	4,678	1.16
1941	11 January	35-36 and 20	363,627	5,812	1.60	123,025	33.83	7,625	2.10
	22 February	19	286,964	39,291	13.69	94,356	32.88	3,229	1.12
	12 April	36-37	317,869	116	.03	89,810	28.25	7,147	2.25
	17 May	37-38	322,461	116	.03	103,730	32.17	5,100	1.58
	31 May	38-39	304,949	125	.04	97,794	32.07	3,164	1.04
	21 June	39-40	151,307	49	.03	45,041	29.77	1,311	.87
	12 July	19	141,000	18,485	13.11	43,950	31.17	1,765	1.25
	6 September	19	154,130	20,839	13.52	49,005	31.79	1,375	.90
	13 December	18	160,205	20,349	12.70	40,687	35.39	1,126	.70
1942	18 April	18	155,579	18,210	11.70	30,177	19.39	1,060	.68
	15 August	18	156,601	20,013	12.78	30,940	19.75	948	.61
	7 November	18	82,235	10,352	12.57	14,168	17.21	434	.53
1943	9 January	17 and 18	155,734	20,123	12.92	26,138	16.77	791	.51
	3 April	17 and 18	81,620	10,900	13.35	10,643	13.04	314	.38
	19 June	17 and 18	78,769	10,277	13.05	8,931	11.30	370	.46
	18 September	17 and 18	69,674	9,154	13.14	5,937	8.52	324	.32
	11 December	17 and 18	69,956	9,821	14.04	5,840	8.37	109	.16
1944	4 March	17 and 18	71,122	9,210	12.95	5,957	8.37	83	.12
	3 June	17 and 18	68,893	8,281	12.02	5,392	7.83	78	.11
	2 September	17 and 18	67,290	6,098	9.06	3,869	5.75	65	.10
	2 December	17 and 18	75,926	5,739	7.56	3,686	4.85	62	.08
1945	3 March	17 and 18	83,411	5,300	6.35	3,109	3.73	41	.05
	9 June	17 and 18	71,461	4,067	5.69	6,907	9.66	161	.23

(1) These figures are taken from "R.A.F. Personnel Statistics" for the period 3 September 1939 to 3 September 1945.

APPENDIX 8

TABLE TO SHOW THE FREQUENT CHANGES IN THE TARGET ESTABLISHMENTS FOR CERTAIN CATEGORIES OF GROUND OFFICERS - MARCH 1940 TO SEPTEMBER 1944 INCLUSIVE[1]

Target Issued	Accountant	Administrative	Code & Cypher	Mechanical Engineering	Electrical Engineering	Equipment	Intelligence & Int. Ops.	Marine Craft	Mechanical Transport	Photography	Photographic Interpretation	Radar	Signals	R.A.F. Works	Catering	Defence & R.A.F. Regiment	Link Trainer Instructor	Target Date	
1940																			
March				2,048								246	701			1,500		1.9.42	
April																			
May																			
June																			
July																			
August																			
September																			
October	1,250	4,000		2,250		2,500				70		250	1,000					1.4.42	Target C.
November																			
December																			
1941																			
January																			
February																			
March																			
April																			
May																			
June																			
July	2,200		2,900	3,600	500	3,750	2,300	150	400	100	200	1,485	1,700				600	1.4.43	Target E Provisional
August	2,000					3,790	2,000	190	460	115	240	1,510	1,750	40					
September	1,993	5,020	2,840	3,425	530	3,747						1,210	1,739	46	460	2,000	520	1.4.43	Target E
October																			
November																			
December																			
1942																			
January				3,100	525								1,795						
February													1,850						
March	1,909	8,398	2,941	3,198	550	3,715	1,705	300	380	230	446	1,258	1,852	349	759	2,471	585	1.1.44	Target E Revised
April																			
May													1,856						
June																			
July													2,386						
August													2,300						
September	1,945					4,568		399	515			1,756	2,333					1.4.44	Target G
October		9,364		3,912	680	4,524	2,321												
November			2,210					524		183	570		2,364	241				1.4.44	Target G Revised
December												1,844							
1943																			
January																			
February																			
March	2,021	11,019	2,370	4,096	696	4,870	2,512	482	676	224	518	1,721	2,710	261	736	2,525	508	1.1.45	Target H
April												1,623							
May																			
June																			
July	1,936	11,597	2,324	4,470	736	4,747	3,044	609	685	229	622	1,696	2,824	288	807	2,500	589	1.1.45	Target H Revised
August																			
September	1,964	11,761	2,602	4,630	797	4,781	3,031	472	691	202	-	1,568	2,903	310	797		788	1.7.45	Target J
October																			
November				4,527	754				722	212									
December																			
1944																			
January	1,870	11,116		4,426	763	4,700	3,104			220	655	1,664	2,876			2,499	382		
February																			
March																			
April		11,500					3,245		787										
May	1,915		2,585					455				1,925							
June		12,320	2,715	4,324	768		3,213		946	215	609	1,808			786	2,458	365		
July	1,972							523					2,982		850				
August	1,599	10,882		3,789	665	5,178	3,238	443	807	180		1,210	2,544		625	1,500		1.10.46	395 Squadron Force
September																			

(1) Figures are taken from Manpower Folders 12, 14, 15, 16 and 20, and from A.M. File S.60424.

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SECRET

APPENDIX 9

SUMMARY OF OFFICER ENTRIES
1 SEPTEMBER 1939 - 31 AUGUST 1945(1)

	1 September 1939 - 31 December 1940			1 January 1941 -31 December 1941			1 January 1942 -31 December 1942			1 January 1943 -31 December 1943			1 January 1944 -31 December 1944			1 January 1945 -31 August 1945			Total		
Ex A = Ex Airmen D.E. = Direct Entry	Ex A	D.E.	Total	Ex A	D.E.	Total	Ex A	D.E.	Total	Ex A	D.E.	Total	Ex A	D.E.	Total	Ex A	D.E.	Total	Ex A	D.E.	Total
G.D. Branch																					
Operational Pilots	2,135	1,184	3,319	5,429	260	5,689	5,273	395	5,668	7,073	44	7,117	8,633	-	8,633	3,557	-	3,557	32,100	1,883	33,983
Non-Operational Pilots	-	-	-	-	4	4	-	-	-	19	3	22	-	-	-	-	-	-	19	7	26
Non-Pilots	-	16	16	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	17	17
Navigators	-	-	-	-	-	-	1,265	5	1,270	3,663	-	3,663	4,143	-	4,143	2,399	-	2,399	11,470	5	11,475
" (B)	428	5	433	1,460	-	1,460	1,688	21	1,709	275	-	275	562	-	562	-	-	-	4,413	26	4,439
" (BW)	-	-	-	-	-	-	1	-	1	15	-	15	5	-	5	-	-	-	21	-	21
" (W)	-	-	-	4	-	4	10	-	10	116	-	116	525	-	525	-	-	-	655	-	655
" (Radar)	-	-	-	74	-	74	24	-	24	177	-	177	13	-	13	-	-	-	288	-	288
Air Bombers	-	-	-	-	-	-	349	-	349	1,214	-	1,214	1,961	-	1,961	731	-	731	4,255	-	4,255
W. Op. Air	-	-	-	7	-	7	339	-	339	1,597	-	1,597	2,958	-	2,958	989	-	989	5,890	-	5,890
Air Gunners	118	546	664	672	1	673	800	16	816	892	-	892	1,418	5	1,423	659	-	4,559	568	568	5,127
Flight Engineers	-	-	-	-	-	-	-	-	-	430	-	430	1,488	-	1,488	831	-	831	2,749	-	2,749
Navigation Instructors	-	37	37	1	81	82	2	1	3	1	1	2	-	-	-	-	-	-	4	120	124
Met. Air Observers	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	3	3
TOTAL	2,681	1,788	4,469	7,647	346	7,993	9,751	439	10,190	15,472	51	15,523	21,706	5	21,711	9,166	-	9,166	66,423	2,629	69,052
Technical Branch																					
Mech. Engineer	386	380	766	806	204	1,010	826	36	862	1,085	13	1,098	71	-	71	16	-	16	3,190	633	3,823
Electrician	-	-	-	63	126	189	140	139	279	233	6	239	44	-	44	-	-	-	480	271	751
Signals	164	320	484	357	496	853	369	67	436	643	2	645	141	2	143	8	-	8	1,682	887	2,569
" (Radar)	-	-	-	34	110	144	96	179	275	331	11	342	37	-	37	87	-	87	585	300	885
Armament	62	45	107	121	201	322	218	16	234	280	3	283	227	-	227	1	1	2	909	266	1,175
Airfield Constn. (CE)	-	-	-	-	-	-	2	85	87	55	12	67	45	3	48	1	9	10	103	109	212
" " (Plant)	-	-	-	-	-	-	2	4	6	1	-	1	1	-	1	2	6	8	6	10	16
" " (M. & E.)	-	-	-	-	-	-	-	6	6	1	2	3	1	-	1	1	-	1	3	8	11
TOTAL	612	745	1,357	1,381	1,137	2,518	1,653	532	2,185	2,629	49	2,678	567	5	572	116	16	132	6,958	2,484	9,442
Other Branches																					
A. and S.D.	705	6,527	7,232	2,542	6,402	8,944	2,169	810	2,979	4,909	72	4,981	2,466	53	2,519	880	23	903	13,671	13,887	27,558
Balloon	350	7	357	311	2	313	117	1	118	1	-	1	-	-	-	-	-	-	779	10	789
Equipment	148	855	1,003	299	970	1,269	365	35	400	831	12	843	358	1	359	159	2	161	2,160	1,875	4,035
Accountant	143	431	574	200	570	770	105	3	108	147	2	149	78	1	79	237	-	237	910	1,007	1,917
Medical	12	670	682	6	721	727	9	419	428	5	249	254	17	118	135	4	77	81	53	2,254	2,307
Dental	-	181	181	2	397	399	-	164	164	1	89	90	-	42	42	-	7	7	3	880	883
Chaplains	-	213	213	2	284	286	1	212	213	-	151	151	1	90	91	-	20	20	4	970	974
Legal	-	17	17	-	1	1	-	-	-	-	2	2	-	-	-	-	-	-	-	20	20
Music	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Meteorological	-	35	35	-	2	2	-	8	8	-	1,095	1,095	57	148	205	119	28	147	176	1,313	1,489
R.A.F. Regiment	-	-	-	-	-	-	1,001	56	1,057	265	14	279	229	2	231	108	-	108	1,603	72	1,675
GRAND TOTAL ALL BRANCHES	4,651	11,469	16,120	12,391	10,832	23,223	15,171	2,679	17,850	24,260	1,786	26,046	25,479	465	25,944	10,789	170	10,959	92,741	27,401	120,142

(1) Figures are taken from 'R.A.F. Personnel Statistics for the period 3 September 1939 to 3 September 1945.

APPENDIX 10

ROYAL AIR FORCE TRADES IN 1919

Group I - Technical

Blacksmith
Carpenter (boat builder)
" (motor body builder)
" (propeller maker)
" (rigger)
Coppersmith
Draughtsman
Electrician (compass setter & repairer)
Fitter (aero engine)
" (general)
" (M.T.)
" (constructional)
" (driver, petrol steam)
" (motor boat)
" (armourer)
" (motor boat coxswain)
" (millwright)
" (jig and tool maker)
Instrument Maker & Camera Repairer
Moulder
Pattern Maker
Turner
Wireless Operator (mechanic)

Group II - Technical

Acetylene Welder
Balloon Basket Maker
Camera Repairer
Electrician
Machinist
Carpenter
Coach Painter
Photographer
Rigger (aero)
" (airship)
Sheet Metal Worker
Tinsmith
Wireless Operator

Group III - Technical

Driver (petrol)
" (steam)
" (winch)
Motor Cyclist
Cook and Butcher
Motor Boat Coxswain
Stoker
Shoemaker
Tailor
Musician
Hydrogen Worker
Vulcaniser
Motor Boat Crew
Fabric Worker
Upholsterer

Group IV - Administrative

Clerk (general)
" (pay)
" (stores)
" (Quartermaster Services)
Meteorologist

Group V - Non-technical

Aircrafthand (batman)
" (aerial gunner)
" (P.T. Instructor)
" (gunnery instructor)
" (general duties)

APPENDIX 11

ROYAL AIR FORCE TRADES IN SEPTEMBER 1939

Group I

Draughtsman
Fitter I
Fitter IIA
Fitter IIE
Fitter Armourer
Fitter Torpedo
Instrument Maker
M.T.S. & O.
Metal Worker
Moulder
W.E.M.

Group II

Armoured Car Crew
Armourer
Balloon Operator
Carpenter
Coach Painter
Electrician
Flight Mechanic
Flight Rigger
Instrument Repairer
Meteorologist
Photographer
Wireless Operator

Group III

Cook & Butcher
Fabric Worker
Motor Boat Crew
Balloon Fabric Worker
Rigger Balloon

Group IV

Interpreter
Clerk G.D.
Clerk Accounting
Equipment Assistant
Teleprinter Operator

Group V

Aircrafthand G.D.
" Messing
" Service Police
Musician
Torpedoman

Medical Group

Dental Mechanic
Dental Orderly
Medical Orderly

ROYAL AIR FORCE TRADE GROUPING IN 1944

MAINTENANCE & SERVICING OF AIRCRAFT TRADES

Fitter I Fitter II Fitter II A Fitter II E Carpenter I Fitter General Carpenter Rigger Rigger Aero. Metal Rigger Engineer	Group I
Flight Mechanic A Flight Mechanic E Sparking Plug Tester	Fitter Group II
Electrician I Electrician II Charging Board Operator Dyno. & S.B. Operator	Electrician Group
Inst. Maker & Repr. Instrument Mechanic Instrument Repairer II	Instrument Group
Metal Worker Acetylene Welder Blacksmith Blacksmith and Welder Coppersmith Coppersmith & S.M. Wkr. Sheet Metal Worker Tinsmith Tinsmith & S.M. Wkr.	Metal Worker Group
M.T.S.O. Machinist Miller Turner Grinder	M.T.S. & O. Group
Parachute Repairer Fabric Worker Balloon Para. Hand Upholsterer	Fabric Worker Group
Aircraft Finisher Carpenter II Carpenter BB Draughtsman Maintenance Assistant Moulder Safety Equipment Worker Safety Equipment Assistant Tracer Workshophand	

(A.M. File S.91923)

ARMAMENT TRADES

Armourer Armourer B Armourer G Armourer T Armourer B.D. Fitter Armourer Fitter Armourer B Fitter Armourer G Fitter Armourer T Torpedoman Fitter Torpedo	Armourer Group
Armament Assistant	

GROUND SIGNALS TRADES

W.E.M. & W.O.M. Wireless Mechanic Radar Mechanic Radar Mechanic A Radar Mechanic B Radar Mechanic F Radar Mechanic G Radar Mechanic R	W. & R. Maintenance Group
Radar Operator R/T Opr. R/T Opr. II R/T Opr. IV R/T Opr. B/F R/T Opr. II D/F R/T Opr. IV D/F R/T Opr. Balloons Wireless Operator Wireless Opr. D/F Wireless Opr. Slip Reader High Speed Telegraphist Signals Teleprinter Operator Telephonist	W. & R. Communication Group
Aerial Erector Clerk C. & C. Clerk Signals	

MECHANICAL TRANSPORT TRADES

Fitter M.T. M.T. Mechanic Vulcaniser	M.T. Maintenance Group
D.M.T. Motor Cyclist A.C.C.	Driver Group
Fitter Marine Motor Boat Crew	Marine Group

MEDICAL TRADES

Chiropodist Dispenser Laboratory Assistant Masseur Nursing Orderly (incl. Clerk Medical) Mental Nursing Orderly Operating Room Asst. Radiographer Sanitary Assistant Special Treatment Orderly Trained Nurse	Medical Group
Dental Clerk Orderly Dental Mechanic Dental Hygienist	Dental Group

WORKS TRADES

Architectural Assistant
Bricklayer
Camouflage Supervisor
Civil Engineering Assistant
Clerk of Works
Concreter
Drainlayer
Draughtsman Arch.
Draughtsman Mech.
Driller
Electrician Works
Elect. Works I
Elect. Works II
Fitter General Works
Fitter S.E.
Foreman of Trades
Foreman General
Groundsman
Mech. S.E.
Plant Opr.
Plumber
Quarryman
Steel Erector
Workshand

BALLOON TRADES

Balloon Opr.
Balloon Fabric Worker
Balloon Rigger Fabric Worker
Driver Winch
Rigger Airship
Rigger Balloon
Hydrogen Worker

GUNNERS

Gunner
P.A.C. Operator

ADMIN. & DOMESTIC TRADES

ACH/G.D.
ACH/Messing
ACH Musician
Admin.
Barber
Batman
Cine Projectionist
Clerk Accounts
Clerk E/A
Clerk P/A.

Clerk G.D.
Clerk G.D. Maps
Clerk G.D. P.S.
Clerk G.D. Postal
Clerk G.D. Provisions
Clerk G.D. Computor

Cook (incl. Hospital)
C.W. Fighter
Embarkation Assistant
Fire Fighter
Hairdresser
Mess Steward
Musician
Orderly
Police (R.A.F. & Station)
P.T. & C.W. Instructor Grp V
P.T.I.
Shoe Repairer
Tailor
W.A.A.F. Police
Waitress

MISCELLANEOUS TRADES

Airfield Controller
Bomber Plotter
Clerk S.D. (incl. Watch)
Coachpainter & painter
Compass Adjuster
Draughtsman (Cart.)
Drogue Packer
Flying Control Assistant
Ground Observer
Interpreter
Interpreter Grp V
Interpreter Tech. II
L.T.I.
Meteorologist
Packer
Pattern Maker Arch.
Photographer
Pigeon Keeper
Recruiter

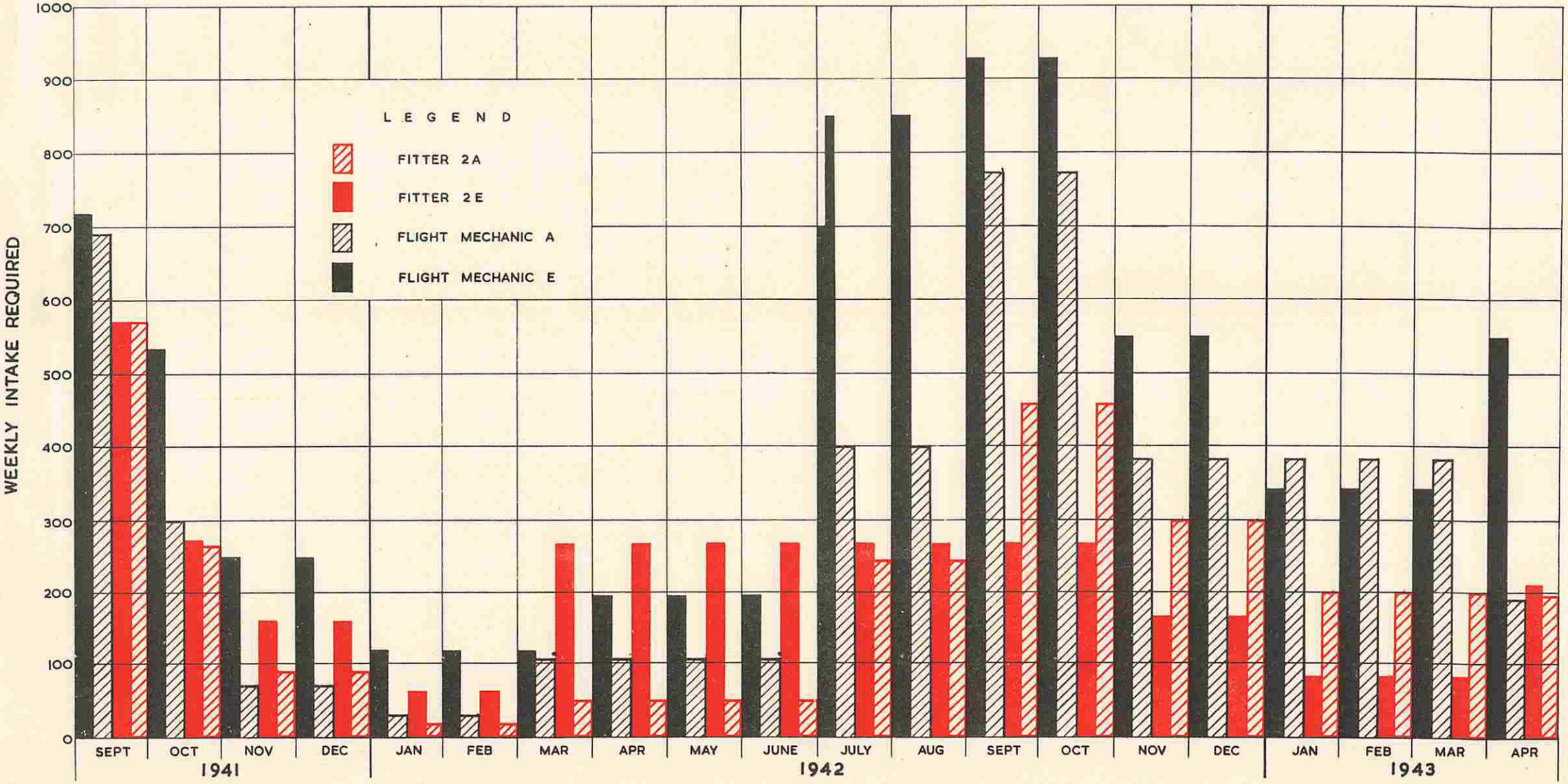
APPENDIX 13

ASSOCIATED TRADES IN WHICH "UNASTERISKED" TRADESMEN COULD BE ENLISTED IF REJECTED BY THE CENTRAL TRADE TEST BOARD FOR THEIR APPROPRIATE SERVICE TRADE

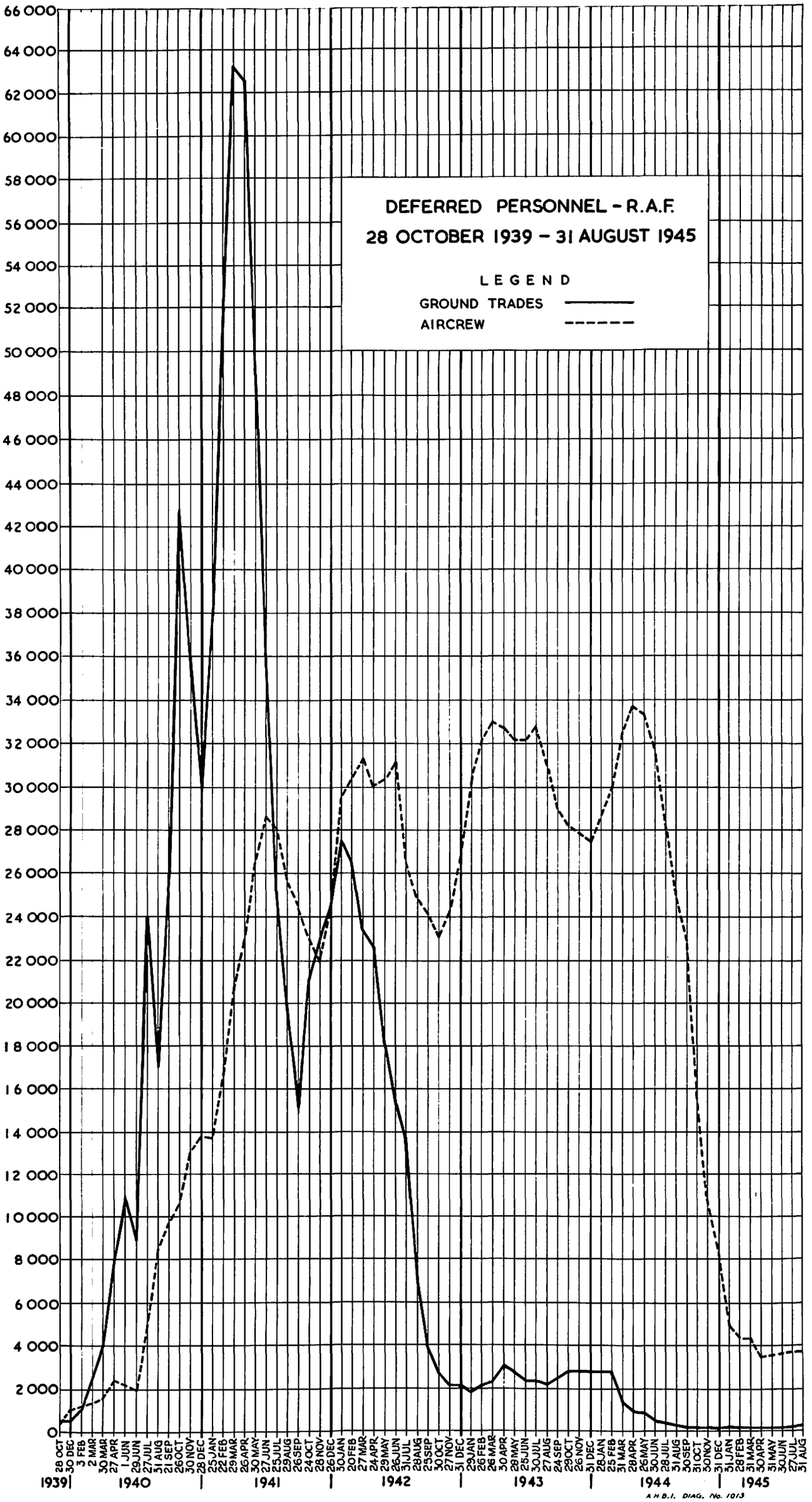
NORMAL SERVICE TRADE	ASSOCIATED SERVICE TRADE(S)
Armourer (guns)	Armourer (bombs) Flight Mechanic Instrument Repairer II
Armourer (bombs)	Armourer (guns) Flight Mechanic Instrument Repairer II
Electrician I	Electrician II Wireless Mechanic Radio Mechanic Instrument Repairer I Instrument Repairer II
Electrician II	Electrician (wireman) Instrument Repairer II
Electrician (wireman)	Electrician II Instrument Repairer II
Fabric Worker (aeroplane)	Balloon Operator
Fitter II (including Fitter Armourer and Fitter Torpedo)	Flight Mechanic Fitter Marine Fitter M.T. M.T. Mechanic Electrician I Instrument Repairer I
Fitter Marine	Flight Mechanic Fitter II Fitter M.T. M.T. Mechanic
Fitter M.T.	Flight Mechanic Fitter II Fitter Marine M.T. Mechanic
Instrument Repairer I	Instrument Repairer II Electrician I Electrician II Wireless Mechanic Radio Mechanic
Instrument Repairer II	Flight Mechanic Electrician II
M.T. Mechanic	Flight Mechanic Driver M.T.
Sheet Metal Worker, Tinsmith	Coppersmith Flight Mechanic

A.M. File A.906555/47.

VARIATION IN REQUIREMENTS FOR FITTERS AND FLIGHT MECHANICS SEPTEMBER 1941 — MAY 1943



A.H.B.I. DIAG. No. 924


DEFERRED PERSONNEL - R.A.F.
28 OCTOBER 1939 - 31 AUGUST 1945
LEGEND
GROUND TRADES
AIRCREW
66 000
64 000
62 000
60 000
58 000
56 000
54 000
52 000
50 000
48 000
46 000
44 000
42 000
40 000
38 000
36 000
34 000
32 000
30 000
28 000
26 000
24 000
22 000
20 000
18 000
16 000
14 000
12 000
10 000
8 000
6 000
4 000
2 000
0
28 OCT
30 DEC
3 FEB
2 MAR
30 MAR
27 APR
1 JUN
29 JUN
27 JUL
31 AUG
21 SEP
26 OCT
30 NOV
28 DEC
25 JAN
22 FEB
29 MAR
26 APR
30 MAY
27 JUN
25 JUL
29 AUG
26 SEP
24 OCT
28 NOV
26 DEC
30 JAN
20 FEB
27 MAR
24 APR
29 MAY
26 JUN
31 JUL
28 AUG
25 SEP
30 OCT
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31 MAR
28 APR
26 MAY
30 JUN
28 JUL
31 AUG
30 SEP
31 OCT
30 NOV
31 DEC
31 JAN
28 FEB
31 MAR
30 APR
31 MAY
30 JUN
27 JUL
31 AUG
1939
1940
1941
1942
1943
1944
1945
A.H.B.I. DIAG. No. 1013

APPENDIX 16

AIRCREW - METHOD OF SELECTION

Aircrew candidates were either volunteers who applied to join the R.A.F. for flying duties while they were still outside the scope of the National Service Acts, N.S.A. entrants who had expressed a preference for flying duties, or serving officers or airmen employed on ground duties who volunteered for aircrew duties. The selection procedure was broadly the same in all three cases.

Under the N.S.A. procedure, a man who had expressed a preference for flying duties on registration was instructed in due course by the Ministry of Labour and National Service to report for medical examination at a Combined Recruiting Centre. If he was passed as Grade I, he was then interviewed by an R.A.F. Recruiting Officer at that Centre in order to decide whether he was prima facie qualified for consideration by an Air Crew Selection and Medical Board. The candidate had to be within a narrow age range and during the first months of the war he was required to have passed his School Certificate examination or to have reached an educational standard equivalent to that of a boy who had remained at school up to the age of 16. From August 1940, however, the educational standard was not taken into account at the initial selection stage, far more attention being given to the man's general suitability, and, in particular, to his keeness for combatant duty in the air. The Selection Board decided later as to the candidate's educational potential.

A few weeks after being provisionally accepted by the Recruiting Officer at the Combined Recruiting Centre, an aircrew candidate was required to attend an Aviation Candidates Selection Board. He also had to pass an aircrew medical examination which was much more specialised and exacting than the N.S.A. medical examination and was carried out by R.A.F. Medical Officers. Certain modifications in medical standards were made as the war progressed, but the standard of physical fitness required of an aircrew candidate remained extremely high.

The Aviation Candidates Selection Board consisted of a President and one or two subordinate members. All were Service officers and together they decided whether a candidate should be accepted and, if so, for what aircrew category.

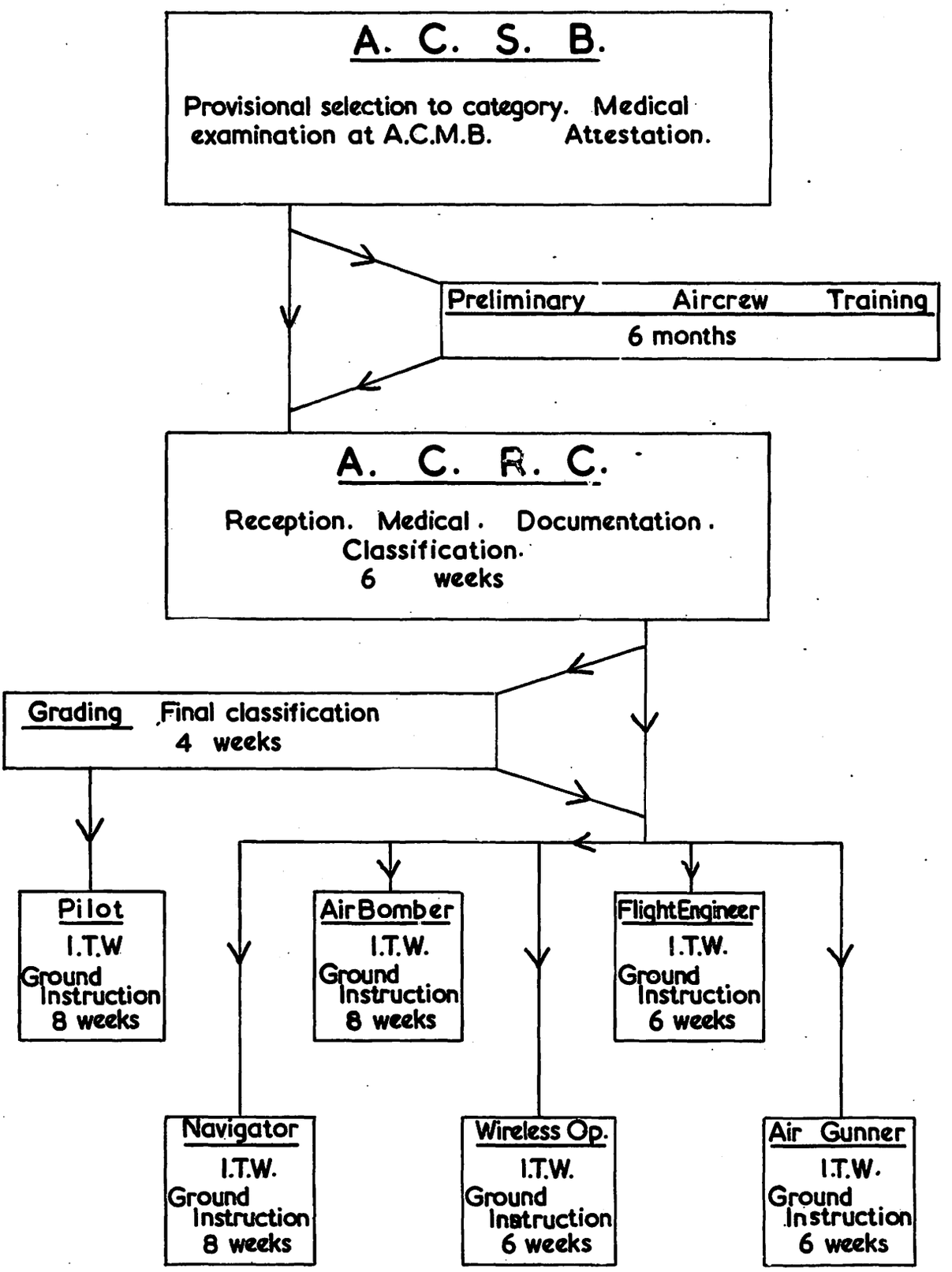
These Selection Boards were set up in all parts of the country although the number varied according to the flow of applicants. (In December 1941, for instance, there were thirty Selection Boards in nine different centres). It was very difficult, however, to assess a man's capacity on interview alone, as training failures clearly indicated, and Professor Bartlett of the Flying Personnel Research Committee at Cambridge gradually devised a series of psychological tests designed to measure a candidate's intelligence, mathematical ability and particular aptitude for each of the aircrew categories. A flight test was also introduced in order to assess a candidate's piloting ability. Other tests were applied right through to the operational stage.

From the spring of 1942 onwards, Selection Boards, while continuing to select for all aircrew categories, accepted candidates considered suitable for training as pilots, navigators or air bombers under the broad heading of 'P.N.B.'. The final split up for these three categories was then made by a Central Air Crew Classification Board after the trainee had demonstrated his aptitude in a Flight Test and had successfully completed the Initial Training Wing Examinations. Other aircrew candidates continued to be classified by the Selection Board.

It was not possible for the accepted aircrew candidate to commence his training immediately. He was therefore issued with a statutory enlistment notice and placed on deferred service. He was told the probable length of the waiting period and then returned home to continue his civil occupation until called up for training by the Air Officer i/c Records. His call up was normally in the order of his acceptance but the date of entry into training could be accelerated on the grounds of exceptional suitability. The length of the waiting period varied considerably but the official policy during the greater part of the war was to maintain a six months supply of accepted candidates.

AIRCREW SELECTION & CLASSIFICATION MACHINERY

APRIL 1944



DIA 79 AHB 1

THE ARGUMENTS FOR AND AGAINST COMMISSIONING ALL PILOTS, AIR BOMBERS AND NAVIGATORS AS PUT FORWARD AT THE OTTAWA CONFERENCE IN MAY 1942.

Canada favoured the commissioning of all pilots, navigators and air bombers for the following reasons:-

(a) Rank commensurate with duties should be granted to all aircrew personnel, there being no justification for the commissioning of certain individuals whilst others are required to perform exactly the same duties but in N.C.O. rank. The responsibility resting upon the individual in aircrew capacity is sufficient justification for commissioned status. N.C.O. rank is not compatible with the heavy responsibilities imposed in commanding large and expensive aircraft.

(b) Inequalities of pay, transportation, travelling allowances and messing, as between commissioned and non-commissioned officers, who are performing service of equal value, give rise to dissatisfaction and a sense of unfairness, which is damaging to morale. A sense of invidious comparison arises, which is very acute in the case of prisoners of war, particularly so where one member of a crew is required to perform menial tasks, while another member is accorded the privileges of an officer.

(c) At training stations it frequently occurs that an N.C.O. instructor is obliged to serve under his former pupil, now a commissioned officer, and, in respect of discipline and command, his senior. The reversal of the normal pupil-instructor relationship is quite unfair. The same situation obtains in operational aircraft where an officer is under the command of an N.C.O. Retarded commissioning action overseas aggravates the situation, it being desirable that commissioning at home should not proceed at a faster rate than overseas.

(d) The team spirit recognised as essential to successful operations is quite impossible to attain so long as the crew, as an entity, is not able to live and fraternise, the one with the other, during leisure and off-duty hours.

(e) Many advantages, uplifted morale and esprit de corps, will accrue if all members of the fighting team are afforded equal rank.

(f) The assurance of a commission upon successful graduation would decidedly stimulate aircrew enlistment. The right type, would be encouraged to join the Air Force in preference to the Army or Navy.

(g) Disciplinary problems have been encountered with Canadian N.C.O. aircrew personnel serving overseas. As senior N.C.O.s, enjoying aircrew prestige, they regard themselves as considerably above their confrere in the Sergeants' Mess. With this attitude, discipline breaks down during periods of inactivity. Commissioned aircrew personnel have presented no such problems, due to the fact that they are very junior members of the Officers' Mess and are aware of the fact.

(h) It is considered that all pilots, navigators and air bombers are of equal importance, the one with the other, and all of them have an equal claim to a commission.

The United Kingdom opposed the commissioning of all pilots, navigators and air bombers for the following reasons:-

(a) A commission is granted in recognition of character, intelligence (as distinct from academic qualifications), and capacity to lead, command and set a worthy example. Many aircrews, though quite capable of performing their duties adequately, have no officer qualities. The

policy proposed by Canada would have the effect of depreciating the value of commissioned rank.

(b) The wholesale granting of commissions to aircrews on graduation or later would give rise to serious repercussions amongst ground crew personnel, many of whom are of long service and are highly skilled. It would lead to a general lowering of discipline throughout the Service.

(c) In addition to the repercussions within the Air Services, there would no doubt be grave difficulties with the other fighting Services.

(d) The argument that men undergoing equal risk should all be of the same status cannot be sustained. The amount of risk incurred is no criterion of suitability for a commission.

(e) Pay must be determined on the basis of the personal qualities required and the degree of responsibility shouldered, and not on the amount of risk incurred.

(f) Any weakness in the discipline of inexperienced crews can best be remedied by training, indiscriminate commissioning would be no solution.

(g) A good team spirit is essential to the success of any organisation, but it is not agreed that this spirit can only be secured by granting the same status to all members of a team. The need for good team spirit is just as great in a tank or a submarine as in an aircraft.

(h) The great demands made on the skill and courage of crews are fully recognised, but it would be wrong to assume that flying and fighting in the air necessarily makes a man into a superman.

(i) The grant of an increased proportion of commissions is not necessary in order to attract men of the right type for aircrew duties. Flying in itself is a great attraction and in any event aircrews have a much better chance of obtaining a commission than entrants into any other branch of the Services.

(j) In allocating commissions under the existing arrangements, too little regard is paid to officer-like qualities. Pupils who are the most successful in training are not necessarily those who will achieve the greatest success in operational flying. It would be a retrograde step, therefore, to grant a large percentage of commissions on graduation.

(k) Whilst it cannot be agreed to adopt commissioning on the wholesale scale advocated, it is the policy that every member of an aircrew who is suitable and is recommended for commissioning by the responsible authorities shall be commissioned. Where the commission is recommended on the strength of post-graduate duties, it takes effect from the date of recommendation.

(l) It is not agreed that members of aircrews who, under existing conditions, do not get commissions, would have been commissioned if they had enlisted in the Army or in the Navy. This is borne out by the fact that many good aircrew candidates are obtained from the ranks of the Army.

APPENDIX 19

WOMEN'S AUXILIARY AIR FORCE INTAKES AND WASTAGE OF PERSONNEL

DATE	INTAKE			WASTAGE
	N.S.A.	VOLUNTEERS	TOTAL	
3. 9.39 - 31.12.40	-	14,672	14,672	3,636
1. 1.41 - 31. 3.41	-	7,608	7,608	1,033
1. 4.31 - 30. 6.41	-	12,852	12,852	1,363
1. 7.41 - 30. 9.41	-	27,346	27,346	1,240
1.10.41 - 31.12.41	-	35,374	35,374	914
1. 1.42 - 31. 3.42	-	13,833	13,833	1,413
1. 4.42 - 30. 6.42	604	15,993	16,597	2,120
1. 7.42 - 30. 9.42	3,400	16,001	19,401	3,346
1.10.42 - 31.12.42	12,197	15,996	28,193	3,449
1. 1.43 - 31. 3.43	7,977	9,902	17,879	3,973
1. 4.43 - 30. 6.43	5,606	343	5,949	4,223
1. 7.43 - 30. 9.43	2,846	644	3,490	4,941
1.10.43 - 31.12.43	628	856	1,484	5,120
1. 1.44 - 31. 3.44	459	4,759	5,218	6,099
1. 4.44 - 30. 6.44	27	4,636	4,663	5,966
1. 7.44 - 30. 9.44	12	2,373	2,386	5,514
1.10.44 - 31.12.44	-	48	48	5,129
1. 1.45 - 31. 3.45	-	4	4	6,532
1. 4.45 - 30. 6.45	-	2	2	6,642
1. 7.45 - 31. 8.45	-	250	250	17,369
TOTAL	33,757	183,492	217,249	90,022

Figures are taken from the C.S.O. Statistical Digest Series C.

APPENDIX 20

DUTIES ON WHICH W.A.A.F. OFFICERS WERE EMPLOYED

Equipment

Accountant

Administrative

Balloons

Catering

Code & Cypher

Filter & Filterer

Int. & Int. Ops.

Ops. Rooms

P.M. and Security

Photographic Interpretation

Radio Supervisory

Signals

Radio

Meteorology

In addition, W.A.A.F. officers were employed on W.A.A.F. (G) duties, and a number of women medical and dental officers served with the R.A.F.

APPENDIX 21

TRADES IN WHICH AIRWOMEN WERE SERVING IN JULY 1944

MAINTENANCE & SERVICING OF AIRCRAFT TRADES

Fitter II A
Fitter II E

Flight Mechanic A
Flight Mechanic E
Sparking Plug Tester

Electrician II
Charging Board Operator

Instrument Repairer I
Instrument Repairer II
Instrument Mechanic

Acetylene Welder

Parachute Repairer
Fabric Worker
Balloon Parachute Hand

Aircraft Finisher
Carpenter II
Maintenance Assistant
Safety Equipment Worker
Safety Equipment Assistant
Tracer
Workshophand

ARMAMENT TRADES

Armourer
Armourer G

Armament Assistant

GROUND SIGNALS TRADES

Wireless Operator Mechanic
Wireless Mechanic
Radar Mechanic

Radar Operator
R/T Operator
Wireless Operator
Wireless Operator D/F
Wireless Operator Slip Reader
Teleprinter Operator
Telephonist

Clerk C. & C.
Clerk Signals

MECHANICAL TRANSPORT TRADES

M.T. Mechanic
Driver M.T.

MEDICAL TRADES

Chiropodist
Dispenser
Laboratory Assistant
Masseuse
Nursing Orderly
Operating Room Assistant
Radiographer

Dental Clerk Orderly
Dental Hygienist

BALLOON TRADES

Balloon Operator
Balloon Fabric Worker
Balloon Rigger Fabric Worker

ADMINISTRATIVE & DOMESTIC TRADES

A.C.H. G.D.
Administrative
Batwoman
Cine Projectionist
Clerk Accounting
Clerk E.A.
Clerk P.A.

Clerk G.D.
Clerk G.D. Maps
Clerk G.D. P.S.
Clerk G.D. Postal
Clerk G.D. Provisioning
Clerk G.D. Computor

Cook
Equipment Assistant
Hairdresser
Mess Stewardess
Orderly
Shoe Repairer
Tailoress
W.A.A.F. Police
Waitress

MISCELLANEOUS TRADES

Bomb Plotter
Clerks S.D. (incl. Watchkeeper)
Draughtsman (Cartog)
Drogue Packer
Meteorologist
Pattern Maker
Photographer

WAR RECRUITING

PART I

R.A.F. RECRUITING

1. Wartime Organisation

(a) On 3 September 1939, recruiting was organised on a war basis and the number of recruiting units was as under:-

(i) Inspector of Recruiting Headquarters.

(ii) 9 Recruiting Area Headquarters.

(iii) 60 Recruiting Centres at which the R.A.F. was represented.

(b) The Inspector of Recruiting was responsible to the Director of Manning for obtaining the number of recruits required in the various recruiting programmes issued to him.

(c) The country was divided into nine Recruiting Areas. The Officers Commanding the Recruiting Areas were responsible to the Inspector of Recruiting for the recruiting organisation of their Areas. Each Recruiting Area contained a number of Combined Recruiting Centres (C.R.C.).

(d) Wartime recruiting for the three Services was carried out at Combined Recruiting Centres. The R.A.F. were represented at sixty of these centres. Each Centre was provided with Medical Boards for the medical examination of recruits and, in addition, with a Ministry of Labour official whose consent had to be obtained on account of the Schedule of Reserved Occupations, to a recruit's acceptance.

(e) Some changes were made in the organisation during the war years, notably the addition of up to twenty Sub-Depots. The main purpose of these was to stimulate W.A.A.F. recruiting, but they were also used to R.A.F. recruiting. During 1943, the Area Recruiting Headquarters were closed down and the Combined Recruiting Centres and the Sub-Depots were then administered directly by the Inspector of Recruiting.

2. R.A.F. Recruiting Procedure

(a) Recruits were obtained from:-

(i) Men who volunteered for enlistment in the R.A.F.V.R. and

(ii) Men who registered under the National Service Acts and were deemed to be enlisted in the R.A.F.V.R.

(b) Volunteers An applicant wishing to volunteer for the R.A.F.V.R. first reported to the R.A.F. Section of the C.R.C., where he completed Part I of the R.A.F. Attestation Form 2167. He was then interviewed by the Ministry of Labour official, who verified the recruits civil occupation and indicated, on Part II of Form 2167 any restrictions that were placed on his enlistment by the S.R.O. After his appearance before the Medical Board which gave his basic grading, the applicant was interviewed by the Recruiting Officer to decide whether he was suitable and eligible to fill any vacancy in aircrew or ground duties according to the latest recruiting programme.

Candidates found suitable for flying duties were drafted to an Aviation Candidates Selection Board for further consideration and a

special medical examination. If accepted by the Board, they were attested at the Attestation Centre connected with the Board. They were then normally sent home for a period of deferred service and were subsequently recalled to an Air Crew Receiving Centre by the Record Office. If rejected for aircrew, candidates were, if eligible, considered for a ground trade.

Candidates considered suitable for a ground trade were drafted to a Recruits Centre where they were trade tested and, if accepted for ground duties, were enlisted either for immediate service or for an agreed period of deferred service. After August 1941, provision was made for those ground recruits who were to be placed on deferred service to be attested at the C.R.C. This was applied particularly to under-age recruits (e.g. A.T.C. members) who could volunteer at 17¼ years but could not join for effective service until they were 18.

(c) National Service Recruits Men who registered with their age group under the National Service Acts were called up by the Ministry of Labour and National Service to the C.R.C. or other recruiting units where they were medically graded. The men who had expressed an Air Force preference at the time of registration were interviewed by an R.A.F. officer. The restrictions as to acceptance into R.A.F. trades were indicated to the Interviewing Officer on the National Service Envelope (Form N.S.1.) which contained the medical report and any other essential documents. The Interviewing Officer, having determined the man's suitability for acceptance, then endorsed the Form N.S.1. with an appropriate marking.

The subsequent call-up of the candidate to an A.C.S.B. or to the Recruits Centre was carried out by the Ministry of Labour in consultation with the Air Ministry. Rejected aircrews were considered for a ground trade and if found unsuitable, they were returned home to be called up, subsequently, for Army interview.

(d) In connection with both volunteers and N.S.A. candidates various safeguards, involving additional procedure, had to be taken in regard to such matters as nationality and security, civil convictions, etc.

3. R.A.F. Recruiting Staff

On the outbreak of war, pre-war recruiting officers were given commissions in the R.A.F.V.R. and their numbers were supplemented by civilians from many professions and occupations, who were also given commissions. Recruiting officers were also obtained from R.A.F. officers transferred from other duties.

R.A.F., N.C.O.'s for recruiting duties were specially selected, chiefly from aircrafthands. Later in the war, only men below Grade I medical category were employed on these duties.

Civilian clerical staff consisted of established and temporary civil servants and, as they were less likely to be transferred than the Service personnel, their employment ensured continuity in the recruiting work and the maintenance of a high standard in office procedure.

PART II

W.A.A.F. RECRUITING

1. Wartime Organisation

For the first eight months of the war, entry to the W.A.A.F. was through the W.A.A.F. Companies which had originally been affiliated to the A.A.F. squadrons. When these squadrons no longer existed as such, W.A.A.F.

recruiting was carried out by W.A.A.F. officers working directly under the Air Ministry.

The Inspector of recruiting took over the administration of W.A.A.F. recruiting in April 1940, and drew up 'Recruiting Regulations for the W.A.A.F.' These regulations laid down the procedure under which volunteers were to be called up, medically examined and drafted to the W.A.A.F. Recruits Centre for enrolment and training. They also gave detailed instructions on the action to be taken with the Ministry of Labour concerning the application of the S.R.O. to each recruit.

By the end of June 1940, W.A.A.F. recruiting was being effected at eight of the nine R.A.F. Area Headquarters. Early in 1941, the ninth Area Headquarters and certain of the C.R.C.s were opened to W.A.A.F. recruiting and arrangements were made to open Recruiting Sub-Depots in certain towns where there was no C.R.C.

2. The recruiting procedure for women closely followed the arrangements for men, with the exception that women were enrolled and not attested.

THE BASES OF MANNING PLANS AND FACTORS TO BE TAKEN INTO ACCOUNT IN MANNING PLANNING

Each expansion programme was translated by D. of O. (Est.) into terms of officer categories and R.A.F. and W.A.A.F. trades. It was then given to D. of M. in the form of a figure for each category or trade to be reached by the target date and an indication of the incidence of expansion. Allowances were made by D. of M. for non-effectiveness, trooping, sickness, etc. There was a further element of non-effectiveness in certain trades on account of N.C.O.s and 'Makers' courses, also by temporary cross employment to meet urgent requirements that could only be made good gradually by training.

Working from the current strength in each trade, and applying the appropriate factors for training wastage and war wastage, a rate of entry to training was calculated to make good any deficiencies and to meet the expansion requirements. In making this plan of entries to training a number of personnel factors had to be taken into account. The completion of the plan involved co-operation with other departments regarding the availability of training facilities and accommodation and with the 'user' branches such as D.D.S.M. and D.G.I.S. on points of detail and the types of personnel required. Constant review and modification of the plans were necessary as a result of short term developments, amendments to establishments, the introduction of new personnel factors, wastage, etc.

The plan having been agreed and issued to the Training Command, the rate of recruit entry was examined, in connection with the monthly recruiting programme, to ensure the filling of courses and to decide the sources of supply, e.g. from N.S.A. recruits, volunteers or serving airmen or airwomen of another trade. As the plans for every trade were based on meeting the target requirements the gross withdrawal of manpower from civil life had, over the whole period, to coincide with the manpower demand. Withdrawals within the total allowed were checked monthly and the balance available noted.

A similar process was applied to officer entries, except that the sources of supply were more numerous, e.g. universities, civil employment, other officer categories, serving airmen.

Aircrew entries, planned on requirements for entries to training supplied by A.M.T.'s Department, were similarly considered in connection with the recruiting programmes. The effect of remustering from aircrew to ground duties those who failed during training, or became unfit for such duties, was brought out in the monthly strength figures, and, in that way, the numbers were brought under consideration in the review of intake requirements.

Examples of Personnel Factors to be taken into account in Manning Planning

1. Losses from ground trades to aircrew categories, e.g. Wireless Operators to Wireless Operators/Air Gunner, and Fitters to Flight Engineers.

2. The Aircrew element required in entries to such trades.

3. Losses from ground trades to commissioning.

4. Changes of personnel policy, e.g.:-

   (a) The sub-division of certain trades for specialist employment.

   (b) The extent of W.A.A.F. substitution in all trades was constantly under review.

   (c) In some trades entries had to be framed to relieve men of Grade I category in trades in which lower category men could be employed.

(d) New trades were frequently introduced, e.g. Safety Equipment Worker, which absorbed some existing trades.

(e) The possibility of the non-return of loaned personnel had to be taken into account.

(f) Proposals for the re-grouping of certain trades groups, e.g. radio and wireless maintenance trades.

(g) Wastage among men, e.g. wireless operators, employed on ground trades whilst awaiting aircrew training due to applications for withdrawal from training for aircrew employment.

(h) The numbers of personnel likely to be forthcoming from non-U.K. sources.

(i) Decisions to employ N.C.O.s in lieu of officers in certain posts, e.g. code and cypher posts, with an immediate effect upon the Clerk G.D. position.

APPENDIX 24

NUMBERS OF MEN AND WOMEN IN AGE AND SERVICE GROUPS - MARCH 1945[1]

	ROYAL AIR FORCE					WOMEN'S AUXILIARY AIR FORCE			TOTAL
A. & S.[2] Group	G.D. OFFICERS	GROUND OFFICERS	AIRMEN AIRCREW	GROUND AIRMEN	TOTAL R.A.F.	OFFICERS	AIRWOMEN	TOTAL W.A.A.F.	R.A.F. & W.A.A.F.
1 & 2	51	2,306	-	4,547	6,904	29	54	83	6,987
3	15	212	-	863	1,090	13	12	25	1,115
4	19	217	-	944	1,180	16	7	23	1,203
5	19	319	-	1,232	1,570	16	6	22	1,592
6	44	467	1	1,726	2,238	23	18	41	2,279
7	28	444	5	2,568	3,045	29	34	63	3,108
8	19	403	6	2,719	3,147	19	26	45	3,192
9	27	443	1	2,564	3,035	26	41	67	3,102
10	41	448	3	2,121	2,613	27	50	77	2,690
11	47	669	5	2,195	2,916	40	45	85	3,001
12	60	587	7	2,452	3,106	35	46	81	3,187
13	72	641	8	2,630	3,351	48	53	101	3,452
14	127	651	9	2,049	3,636	57	74	131	3,767
15	149	719	31	3,196	4,095	63	89	152	4,247
16	177	723	38	3,923	4,861	70	99	169	5,030
17	223	872	60	4,585	5,740	83	125	208	5,948
18	305	979	90	6,229	7,603	74	141	215	7,818
19	405	1,024	130	8,819	10,378	106	158	264	10,642
20	563	1,304	174	15,502	17,543	94	208	302	17,845
21	659	1,587	272	26,903	29,421	130	245	375	29,796
22	851	1,521	372	27,363	30,107	122	302	424	30,531
23	1,144	1,611	474	30,504	33,813	144	360	504	34,317
24	1,104	2,081	698	35,069	38,952	170	423	593	39,545
25	1,531	2,297	959	43,542	48,329	189	440	629	48,958
26	1,764	3,085	1,358	42,978	49,185	215	580	795	49,980
27	2,029	1,560	1,679	42,319	47,587	211	715	926	48,513
28	1,517	1,501	1,340	30,326	34,684	189	892	1,081	35,765
29	1,097	1,024	981	21,174	24,276	154	866	1,020	25,296
30	885	749	796	16,361	18,791	183	1,065	1,248	20,039
31	973	584	871	17,663	20,091	186	1,413	1,599	21,690
32	1,396	644	1,543	23,240	26,823	210	1,804	2,014	28,837
33	1,283	457	1,662	17,008	20,410	192	2,160	2,352	22,762
34	1,148	340	1,668	14,773	17,929	199	2,779	2,978	20,907
35	1,036	287	1,511	13,912	16,746	171	2,984	3,155	19,901
36	1,015	260	1,766	17,670	20,711	170	3,997	4,167	24,878
37	1,145	197	1,814	24,016	27,172	209	5,443	5,652	32,824
38	1,223	232	2,043	26,983	30,481	199	6,651	6,850	37,331
39	1,499	265	2,820	31,514	36,098	146	6,517	6,663	42,761
40	1,460	243	3,278	22,562	27,543	122	6,666	6,788	34,331
41	1,107	161	3,074	15,330	19,680	107	6,791	6,898	26,578
42	921	115	2,782	10,253	14,071	88	6,024	6,112	20,183
43	852	89	2,525	6,981	10,447	38	5,349	5,387	15,834
44	1,117	85	3,208	8,496	12,906	42	5,100	5,142	18,048
45	929	81	3,559	12,022	16,591	23	6,625	6,648	23,239
46	784	95	3,346	11,819	16,044	7	9,263	9,270	25,314
47	1,008	119	5,063	10,845	17,035	13	10,064	10,077	27,112
48	735	92	3,782	8,908	13,517	9	9,299	9,308	22,825
49	555	59	3,242	7,042	10,898	7	7,925	7,932	18,830
50	299	27	3,008	7,190	10,524	2	6,182	6,184	16,708
51	352	31	4,213	3,903	8,499	5	3,563	3,568	12,067
52	469	44	5,863	4,978	11,354	3	2,519	2,522	13,876
53	183	45	5,421	5,221	10,870	6	1,310	1,316	12,186
54	181	61	5,928	4,782	10,952	12	794	806	11,758
55	101	43	6,577	4,657	11,378	12	480	492	11,870
56	57	45	5,474	4,218	9,794	1	513	514	10,308
57	9	27	4,055	4,614	8,705	1	193	194	8,899
58	5	8	3,078	2,263	5,354	-	1,562	1,562	6,916
59	1	7	3,520	2,390	5,918	-	3,054	3,054	8,972
60	-	4	3,413	3,274	6,691	-	2,686	2,686	9,377
61	-	-	2,843	1,495	4,338	-	1,980	1,980	6,318
62	-	-	1,720	270	1,990	-	1,089	1,089	3,079
63	-	-	493	46	539	-	210	210	749
64	-	-	3	43	46	-	32	32	78
Unclass.	-	-	170	2,216	2,386	-	10	10	2,396
TOTALS	36,815	35,191	114,833	740,888	927,727	4,755	140,205	144,960	1,072,687[3]

(1) A.H.B./III/36/2.
(2) A Man's Age and Service Group was determined by his age and length of war service, one year of age counting the same as two months of service.
(3) The figures quoted in this table do not represent the total strength of R.A.F. and W.A.A.F. in March 1945.

APPENDIX 25

RELEASES FROM THE ROYAL AIR FORCE AND WOMEN'S AUXILIARY AIR FORCE

18 JUNE 1945 TO 31 DECEMBER 1948

	ROYAL AIR FORCE				WOMEN'S AUXILIARY AIR FORCE			
	Class A	Class B	Other Releases and Discharges	Total	Class A	Class B	Other Releases and Discharges	Total
1945								
18 June-31 October	106,530	9,941	18,641	135,112	36,093	82	7,265	43,460
November	92,259	7,284	4,037	103,580	9,699	215	1,030	10,944
December	54,412	7,058	2,794	64,264	6,960	110	615	7,685
1946								
January	60,700	5,820	2,830	69,350	10,080	70	550	10,700
February	33,830	5,820	2,270	41,920	6,760	90	470	7,320
March	57,750	7,540	2,870	68,160	9,910	110	800	10,820
April	47,970	4,130	1,560	53,660	6,390	70	460	6,920
May	53,500	2,260	1,690	57,450	9,130	60	500	9,690
June	43,190	1,720	1,690	46,600	6,550	30	460	7,040
July	39,540	940	1,430	41,910	6,690	41	380	7,111
August	31,480	850	1,060	33,390	3,860	30	390	4,280
September	42,590	710	780	44,080	4,630	20	240	4,890
October	15,580	390	2,160	18,130	3,420	20	420	3,860
November	17,310	180	1,220	18,710	2,960	-	230	3,190
December	15,240	120	1,100	16,460	1,750	10	50	1,810
1947								
January	11,500	80	1,890	13,470	1,500	-	360	1,860
February	10,000	40	570	10,610	920	-	180	1,100
March	16,970	40	350	17,360	1,270	-	50	1,320
April	10,080	270	1,120	11,470	1,070	10	210	1,290
May	9,370	250	1,450	11,070	1,030	10	200	1,240
June	6,370	160	1,270	7,800	1,140	-	200	1,340
July	8,810	160	1,400	10,370	1,290	-	320	1,610
August	5,060	210	1,100	6,370	1,610	-	160	1,770
September	3,760	450	1,540	5,750	1,170	10	190	1,370
October	4,600	110	1,270	5,980	1,160	10	180	1,350
November	6,740	80	990	7,810	760	-	50	810
December	7,420	50	940	8,410	560	-	40	600
1948								
January	14,860	30	1,530	16,420	890	-	90	980
February	17,810	10	1,020	18,840	860	-	460	1,320
March	18,750	10	750	19,510	1,080	-	1400	1,220
April	8,910	10	840	9,760	770	-	240	1,010
May	9,120	10	410	9,540	750	-	160	910
June	9,280	10	530	9,820	700	-	120	820
July	8,980	-	1,240	10,220	810	-	190	1,000
August	8,230	90	970	9,290	740	-	170	910
September	4,010	490	1,040	5,540	610	-	130	740
October	580	200	1,210	1,990	500	-	210	710
November	1,180	20	970	2,170	260	-	170	430
December	4,050	10	1,380	5,440	100	-	190	290

These figures are taken from the Ministry of Labour Monthly Statements of Releases and Discharges from the Forces. No statements were issued after December 1948 as the demobilisation of the wartime Forces was then almost complete.

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